
NNN NNN EEEEEEEEEEEEEEE TTTTTTTTTTTTTTT AAAAAAAAA CCCCCCCCCCCC PPPPPPPPPPPP
NNN NNN EEE TTT AAA AAA CCC PPP PPP
NNNNNN NNN EEE TTT AAA AAA CCC PPP PPP
NNN NNN NNN EEEEEEEEEEEE TTT AAA AAA CCC PPPPPPPPPPPP
NNN NNNNNN EEE TTT AAAAAAAAAAAAAAA CCC PPP
NNN NNN EEE TTT AAA AAA CCCCCCCCCCCC PPP

FILEID**NETCONECT

```
NN      NN  EEEEEEEEEE  TTTTTTTTTT    CCCCCCCC    OOOOOO    NN      NN  EEEEEEEEEE    CCCCCCCC  TTTTTTTTTT
NN      NN  EEEEEEEEEE  TTTTTTTTTT    CCCCCCCC    OOOOOO    NN      NN  EEEEEEEEEE    CCCCCCCC  TTTTTTTTTT
NN      NN  EE              TT      CC          OO      OO  NN      NN  EE          CC              TT
NN      NN  EE              TT      CC          OO      OO  NN      NN  EE          CC              TT
NNNN    NN  EE              TT      CC          OO      OO  NNNN    NN  EE          CC              TT
NN NN   NN  EEEEEEEE        TT      CC          OO      OO  NN NN   NN  EEEEEEEE    CC              TT
NN  NN  NN  EEEEEEEE        TT      CC          OO      OO  NN  NN  NN  EEEEEEEE    CC              TT
NN    NNNN  EE              TT      CC          OO      OO  NN    NNNN  EE          CC              TT
NN    NNNN  EE              TT      CC          OO      OO  NN    NNNN  EE          CC              TT
NN      NN  EE              TT      CC          OO      OO  NN      NN  EE          CC              TT      ....
NN      NN  EE              TT      CC          OO      OO  NN      NN  EE          CC              TT      ....
NN      NN  EEEEEEEEEE      TT        CCCCCCCC    OOOOOO    NN      NN  EEEEEEEEEE    CCCCCCCC      TT      ....
NN      NN  EEEEEEEEEE      TT        CCCCCCCC    OOOOOO    NN      NN  EEEEEEEEEE    CCCCCCCC      TT      ....

LL              IIIIII      SSSSSSSS
LL              IIIIII      SSSSSSSS
LL                II      SS
LL                II      SS
LL                II      SS
LL                II      SS
LL                II        SSSSSS
LL                II        SSSSSS
LL                II              SS
LL                II              SS
LL                II              SS
LL                II              SS
LLLLLLLLLL      IIIIII    SSSSSSSS
LLLLLLLLLL      IIIIII    SSSSSSSS
```

Table of contents

```
0000     1          .TITLE  NETCONECT - Process user connect requests
0000     2          .IDENT  'V04-000'
0000     3          .DEFAULT DISPLACEMENT,LONG
0000     4
0000     5  ;****************************************************************************
0000     6  ;*                                                                          *
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0000    24  ;*                                                                          *
0000    25  ;*                                                                          *
0000    26  ;****************************************************************************
0000    27  ;
0000    28  ; FACILITY:     NETWORK ACP
0000    29  ;
0000    30  ; ABSTRACT:
0000    31  ;
0000    32  ; This module performs processing for logical-link connect requests including
0000    33  ; connect initialize, connect confirm, and connect reject.
0000    34  ;
0000    35  ; The Network Connect Block (NCB) is parsed and an Internal Connect Block (ICB)
0000    36  ; containing the parse, is built and hung onto the IRP.  The IRP is requeued
0000    37  ; to the  NETDRIVER.
0000    38  ;
0000    39  ; NCBs have the same form as the translation of the logical name  "SYS$NET"
0000    40  ; and is shown below.
0000    41  ;
0000    42  ;     node"access control info"::"object=taskname/linknumber+userdata"
0000    43  ;
0000    44  ;       'node'      may be specified either by name or number.
0000    45  ;       'object'    may be specified either by name or number.
0000    46  ;       'taskname'  is required if the object number is zero and is only
0000    47  ;                   allowed if the object number is zero.
0000    48  ;
0000    49  ;
0000    50  ; ENVIRONMENT:
0000    51  ;
0000    52  ;       MODE = KERNEL
0000    53  ;
0000    54  ; AUTHOR:       A.Eldridge,   CREATION DATE: 10-JUN-79
0000    55  ;
0000    56  ; MODIFIED BY:
0000    57  ;
```

```
                                                I  5
0000     58 ;        V03-035 PRB0344         Paul Beck       27-Jul-1984  13:21
0000     59 ;                Fix truncation error.
0000     60 ;
0000     61 ;        V03-034 ADE0035         Alan D. Eldridge        25-Jun-1984
0000     62 ;                Don't override XWB creation/insertion error code with
0000     63 ;                "SS$_NOLINKS".
0000     64 ;
0000     65 ;        V03-033 PRB0316         Paul Beck       8-Mar-1984  17:13
0000     66 ;                Resequence local symbols in PRS_NODE.
0000     67 ;                Allow endnode to offer larger buffer size if the buffer
0000     68 ;                associated with the line is larger than the executor buffer
0000     69 ;                size. This requires that the link be nonadaptive, but offers
0000     70 ;                performance wins.
0000     71 ;
0000     72 ;        V03-032 ADE0034         Alan D. Eldirdge        15-Feb-1984
0000     73 ;                Modify it use LLI database and insert XWB's into the LTB
0000     74 ;                vector. Send the External PID format in format type 2
0000     75 ;                connect requests.
0000     76 ;
0000     77 ;        V03-031 PRB0309         Paul Beck       23-Jan-1984  14:30
0000     78 ;                Do not make link nonadaptive if line buffer size equals
0000     79 ;                the executor buffer size. Undoes part of TMH0030.
0000     80 ;
0000     81 ;        V030    TMH0030         Tim Halvorsen   10-Jul-1983
0000     82 ;                Fix detection of "1 hop away" for purposes of using
0000     83 ;                line buffer size.  The previous check never worked
0000     84 ;                and always used the line buffer size if specified.
0000     85 ;                Allow normal NDI entries to specify an explicit output
0000     86 ;                circuit, overriding the decision algorithm.  This is
0000     87 ;                similar to loop nodes, but applies to nodes with real
0000     88 ;                remote addresses.
0000     89 ;                Remove check which ignored LINE BUFFER SIZE if it was
0000     90 ;                lower than the executor buffer size, so that as long
0000     91 ;                as the line buffer size parameter was explicitly specified,
0000     92 ;                is is used.
0000     93 ;
0000     94 ;        V029    TMH0029         Tim Halvorsen   31-May-1983
0000     95 ;                Fix problem with NODE ACCESS checking if the user
0000     96 ;                specified a node address without an area number.
0000     97 ;
0000     98 ;        V028    RNG0028         Rod Gamache     20-Apr-1983
0000     99 ;                Fix branch destination out of range.
0000    100 ;
0000    101 ;        V027    TMH0027         Tim Halvorsen   05-Mar-1983
0000    102 ;                Remove obsolete DLE code (replaced by completely
0000    103 ;                rewritten DLE module).
0000    104 ;
0000    105 ;        V026    TMH0026         Tim Halvorsen   14-Feb-1983
0000    106 ;                Remove node proxy access parameter.
0000    107 ;                Add support for "line buffer size" which can be used by a
0000    108 ;                system manager to override the executor buffer size on
0000    109 ;                a per-line basis.  This parameter has special meaning,
0000    110 ;                in that when used to increase the line's buffer size
0000    111 ;                higher than the executor buffer size, then all logical
0000    112 ;                links to adjacent nodes over this line become "non-adaptive",
0000    113 ;                and use the larger buffer size for optimized performance.
0000    114 ;                Add support for EPIDs.
```

```
0000   115 ;
0000   116 ;       V025    TMH0025         Tim Halvorsen   28-Dec-1982
0000   117 ;               Send username rather than PID with outgoing connects
0000   118 ;               if default access control is supplied to the remote node
0000   119 ;               (except the nonprivileged local node case).
0000   120 ;               Fix local outgoing connect case so that nonprivileged
0000   121 ;               access is supplied on the inbound side, not the outbound
0000   122 ;               side.  This fixes a problem with proxy that prevented
0000   123 ;               proxy from working on local connects unless the local NDI
0000   124 ;               proxy was set.
0000   125 ;               Fix long-standing bug which prevented outgoing default
0000   126 ;               access control from being applied because some junk in
0000   127 ;               the upper word of the NDI search key wasn't being zeroed.
0000   128 ;               This fixes both outgoing default access control for remote
0000   129 ;               nodes, and it fixes the privileged access control mechanism.
0000   130 ;               It also fixes loop nodes, which were failing to associate
0000   131 ;               the link with the proper circuit, and were using the local
0000   132 ;               LPD instead.
0000   133 ;               Fix loop node connect, so that if the circuit exists, but
0000   134 ;               has no LPD (the state is off), then an error is returned.
0000   135 ;
0000   136 ;       V024    TMH0024         Tim Halvorsen   29-Oct-1982
0000   137 ;               Add area routing support.
0000   138 ;               Fix DLE so that it matches by user channel as well
0000   139 ;               as PID, so that a cancel on another NET channel doesn't
0000   140 ;               blow away DLE channels.
0000   141 ;
0000   142 ;       V023    TMH0023         Tim Halvorsen   29-Sep-1982
0000   143 ;               Avoid check which ensures that a node is reachable
0000   144 ;               at connect time if we are an endnode.
0000   145 ;
0000   146 ;       V022    TMH0022         Tim Halvorsen   02-Sep-1982
0000   147 ;               Remove check of XWB state in DLE cancel routine.
0000   148 ;
0000   149 ;       V021    TMH0021         Tim Halvorsen   22-Jul-1982
0000   150 ;               Modify call to TEST_REACH, to use adjacency symbols
0000   151 ;               to determine the type of partner node.
0000   152 ;
0000   153 ;       V020    TMH0020         Tim Halvorsen   29-Jun-1982
0000   154 ;               Add $DYNDEF definition.
0000   155 ;
0000   156 ;       V019    TMH0019         Tim Halvorsen   09-Apr-1982
0000   157 ;               Fix proxy access checking for inbound connect requests
0000   158 ;               of zero-numbered objects with the name in the NCB.
0000   159 ;               It didn't correctly look up the proxy access parameter
0000   160 ;               in the named OBI entry, but used the number proxy access
0000   161 ;               value instead.
0000   162 ;               Pick up address of utility buffer, rather than referencing
0000   163 ;               a statically defined location.
0000   164 ;
0000   165 ;       V018    TMH0018         Tim Halvorsen   05-Mar-1982
0000   166 ;               Mark ACP in "dismount" state when the mount count goes
0000   167 ;               to zero, to avoid a race between the final DLE XWB coming
0000   168 ;               back from NETDRIVER and a new ACCESS function coming in
0000   169 ;               from a user.  The "dismount" state will signal the EXEC
0000   170 ;               to reject the QIO request.
0000   171 ;
```

```
0000   172 ;        X02-17  ADE0033         A.Eldridge      25-Jan-1982
0000   173 ;                Disallow default outbound access control if connect uses
0000   174 ;                proxy login.
0000   175 ;
0000   176 ;        X02-16  ADE0032         A.Eldridge      18-Jan-1982
0000   177 ;                Require OPER priv on IO$_ACCESS for circuit "direct-access".
0000   178 ;
0000   179 ;        X02-15  ADE0031         A.Eldridge      18-Dec-1981
0000   180 ;                Enter remote object name as the RID field (remote i.d.)
0000   181 ;                when initiating outbound connects.
0000   182 ;
0000   183 ;        X02-14  ADE0030         A.Eldridge      30-Nov-1981
0000   184 ;                Added proxy login support.
0000   185 ;
0000   186 ;        X02-13  ADE0029         A.Eldridge      11-Nov-1981
0000   187 ;                Identify local process by username rather than PID in order
0000   188 ;                to allow the implementation of proxy logins at the remote
0000   189 ;                side of the link.
0000   190 ;
0000   191 ;        X02-12
0000   192 ;        -X02-10 ADE0028         A.Eldridge      1-Nov-1981
0000   193 ;                Fix bugs in "direct-link access" code.
0000   194 ;
0000   195 ;        X02-09                  A.Eldridge      1-Oct-1981
0000   196 ;                Put in "direct-link access" interface.
0000   197 ;
0000   198 ;        X02-08                  A.Eldridge      1-Oct-1981
0000   199 ;                Permanent modification to optionally restrict logical link
0000   200 ;                access based upon the "access state" of the remote node and
0000   201 ;                the privilege of the local user.
0000   202 ;
0000   203 ;        X02-07                  A.Eldridge      1-APR-1981
0000   204 ;                Tempory modification to optionally restrict outbound access
0000   205 ;                to selected nodes by nonprivileged users.  This is for DECUS
0000   206 ;                and NCC demos.
0000   207 ;
0000   208 ;        V02-04                  A.Eldridge      11-NOV-1979
0000   209 ;                Modify for new node, object, and task data base
0000   210 ;
0000   211 ;        V02-03                  S.G.D.  11-JUN-1979
0000   212 ;                Modify for routing.
0000   213 ;        V02-02  SGD00007        S.G.D.  22-NOV-1978     13:10
0000   214 ;                Allow multiple spaces and tabs in access control info.
0000   215 ;
0000   216 ;&
0000   217 ;& need to fix bug which disallows a null destination name on connect confirm
```

```
                        0000    219 .SBTTL  DECLARATIONS
                        0000    220 ;
                        0000    221 ; INCLUDE FILES:
                        0000    222 ;
                        0000    223         $ABDDEF
                        0000    224         $DRDEF
                        0000    225         $DYNDEF
                        0000    226         $IRPDEF
                        0000    227         $PRVDEF
                        0000    228         $JPIDEF
                        0000    229
                        0000    230         $CNRDEF
                        0000    231         $CNFDEF
                        0000    232
                        0000    233         $NETSYMDEF
                        0000    234         $NETUPDDEF
                        0000    235         $NSPMSGDEF      ; DNA architecture definitions & message formats
                        0000    236
                        0000    237         $ICBDEF
                        0000    238         $LTBDEF
                        0000    239         $NMADEF
                        0000    240         $NFBDEF
                        0000    241         $RCBDEF
                        0000    242         $ADJDEF
                        0000    243         $LPDDEF
                        0000    244         $XWBDEF
                        0000    245
                        0000    246 ;
                        0000    247 ; MACROS:
                        0000    248 ;
                        0000    249 .MACRO FILL_INC  NUMCHARS,STARTCHAR,STARTPOS    ; Fill range with
                        0000    250                                                 ; increasing values
                        0000    251         .=.-256+STARTPOS                        ; Reposition PC
                        0000    252
                        0000    253                 C=STARTCHAR
                        0000    254         .REPT   NUMCHARS                        ; Loop for each char.
                        0000    255         .BYTE   C                               ; Store character
                        0000    256                 C=C+1                           ; Bump character
                        0000    257         .ENDR
                        0000    258
                        0000    259         .=.-NUMCHARS-STARTPOS+256               ; Restore PC
                        0000    260 .ENDM
                        0000    261
                        0000    262
                        0000    263 ;
                        0000    264 ; EQUATED SYMBOLS:
                        0000    265 ;
                00000009 0000   266 TAB     = ^X<09>                ; ASCII for tab
                00000020 0000   267 SPACE   = ^X<20>                ; ASCII for space
                        0000    268
                        0000    269 ;
                        0000    270 ; OWN STORAGE:
                        0000    271 ;
                00000000 0000   272         .PSECT  NET_PURE,NOWRT,NOEXE,LONG
                        0000    273
                        0000    274
                        0000    275 PRV_TAB:                                ; Field i.d.'s for privilege access
```

```
                                     0000
                                     0000          .CNFFLD ndi,s,pus              ; Privileged user field i.d.
                                     0004          .CNFFLD ndi,s,ppw              ; Privileged password field i.d.
                                     0008          .CNFFLD ndi,s,pac              ; Privileged accoutn field i.d.
                          00000000   000C          .LONG   0
                                     0010
                                     0010  NONPRV_TAB:                            ; Field i.d.'s for nonprivileged access
                                     0010
                                     0010          .CNFFLD ndi,s,nus              ; Nonpriv user field i.d.
                                     0014          .CNFFLD ndi,s,npw              ; Nonpriv password field i.d.
                                     0018          .CNFFLD ndi,s,nac              ; Nonpriv account field i.d.
                          00000000   001C          .LONG   0
                                     0020
42 41 39 38 37 36 35 34 33 32 31 30  0020  BIN_HEXASC:     .ASCII  /0123456789ABCDEF/ ; For binary to Hex Ascii conversion
                         46 45 44 43 002C
                                     0030
                                     0030  NET$AB_UPASCNUM::                      ; Translation table for upper
                                     0030                                         ; case ASCII and numerics
00'00'00'00'00'00'00'00'00'00'00'00' 0030                  .BYTE   0[256]         ; Fill initially with terminator
00'00'00'00'00'00'00'00'00'00'00'00' 003C
00'00'00'00'00'00'00'00'00'00'00'00' 0048
00'00'00'00'00'00'00'00'00'00'00'00' 0054
00'00'00'00'00'00'00'00'00'00'00'00' 0060
00'00'00'00'00'00'00'00'00'00'00'00' 006C
00'00'00'00'00'00'00'00'00'00'00'00' 0078
00'00'00'00'00'00'00'00'00'00'00'00' 0084
00'00'00'00'00'00'00'00'00'00'00'00' 0090
00'00'00'00'00'00'00'00'00'00'00'00' 009C
00'00'00'00'00'00'00'00'00'00'00'00' 00A8
00'00'00'00'00'00'00'00'00'00'00'00' 00B4
00'00'00'00'00'00'00'00'00'00'00'00' 00C0
00'00'00'00'00'00'00'00'00'00'00'00' 00CC
00'00'00'00'00'00'00'00'00'00'00'00' 00D8
00'00'00'00'00'00'00'00'00'00'00'00' 00E4
00'00'00'00'00'00'00'00'00'00'00'00' 00F0
00'00'00'00'00'00'00'00'00'00'00'00' 00FC
00'00'00'00'00'00'00'00'00'00'00'00' 0108
00'00'00'00'00'00'00'00'00'00'00'00' 0114
00'00'00'00'00'00'00'00'00'00'00'00' 0120
                         00'00'00'00' 012C
                                     0130       FILL_INC 10,<^A"0">,<^A"0">       ; All numerics trans to themselves
                                     0130       FILL_INC 26,<^A"A">,<^A"A">       ; All upper case "   "    "
                                     0130       FILL_INC 26,<^A"A">,<^A"a">       ; All lower case "   " uppercase
                                     0130
                                     0130  NET$AB_OBJTRAN:                        ; Translation table for object names
                                     0130          .REPT   256
                                     0130          .BYTE   .-NET$AB_OBJTRAN       ; Fill up translation tabel with .=.
                                00   0130          .ENDR
                                     0230       FILL_INC  1,<0>,<^A/"/>           ; Make /"/ a delimiter
                                     0230       FILL_INC  1,<0>,<^A"/">           ; Make "/" a delimiter
                                     0230       FILL_INC 26,<^A"A">,<^A"a">       ; All lower case "   " uppercase
                                     0230
                          00000330   0230  NET$AB_ACC_TAB: .BLKB   256            ; Translation table for access control
                                     0330
                                     0330       FILL_INC 256,0,0                  ; Init so that each character translates
                                     0330                                         ; to itself
                                     0330       FILL_INC 1,0,SPACE                ; Space is a terminator
```

```
                     0330   311     FILL_INC 1,0,TAB                ; Tab   is a terminator
                     0330   312     FILL_INC 1,0,<^A/''/>           ; Quote is a terminator
                     0330   313
                     0330   314
                00000000    315         .PSECT  NET_IMPURE,WRT,NOEXE,LONG
                     0000   316
            00000000  0000   317 ACC_TAB:        .LONG   0           ; Points to current access table
            00000000  0004   318 NDI_PTR:        .LONG   0           ; Points to NDI describing the node
            00000000  0008   319 OBI_PTR:        .LONG   0           ; Points to destination OBI
                      000C   320
00000000 00000000  000C   321 OBJ_Q_DESC:     .QUAD   0           ; Object specifier from NCB
00000000 00000000  0014   322 TSK_Q_DESC:     .QUAD   0           ; Task   specifier from NCB
                      001C   323
              00    001C   324 NDI_B_ACC:      .BYTE   0           ; NDI access state
              00    001D   325 OBI_B_PRX:      .BYTE   0           ; OBI proxy access state
              00    001E   326 INT_B_PRX:      .BYTE   0           ; Internal proxy access state
        00000020    001F   327                 .BLKB   1           ; (spare for alignment)
                      0020   328
00000000 00000000  0020   329 JPI_Q_IOSB:     .QUAD   0           ; IOSB for GET_JPI
        00000000  0028   330 JPI_B_UNAME:    .LONG   0           ; Returns resultant user name length
        00000038  002C   331 JPI_T_UNAME:    .BLKB   12          ; Returns user name
                      0038   332
                      0038   333 JPI_ITEM_LIST:                   ; $GETJPI item list for logical links
            000C      0038   334                 .WORD   12          ; Size of username buffer
            0202      003A   335                 .WORD   JPI$_USERNAME ; I.d. of username parameter
        0000002C'     003C   336                 .LONG   JPI_T_UNAME ; Address of username buffer
        00000028'     0040   337                 .LONG   JPI_B_UNAME ; Address of buffer to return length
        00000000      0044   338                 .LONG   0           ; Terminate the list
                      0048   339
                00000000    340         .PSECT  NET_CODE,NOWRT,EXE
                     0000   341
```

```
                                                B 6
                     0000    343 .SBTTL  NET$CONNECT     - IO$_ACCESS $QIO Procesing
                     0000    344 ;++
                     0000    345 ;
                     0000    346 ; This routine processes user connect inits or confirms.  Parameters and
                     0000    347 ; connect block (NCB) are validated.  Information in the NCB is passed to
                     0000    348 ; NETDRIVER in an ICB (Internal Connect Block).
                     0000    349 ;
                     0000    350 ; Connect Initiates and Confirms are distinguished by the value of the
                     0000    351 ; word following the remote process identifier:
                     0000    352 ;
                     0000    353 ;       Connect Initiates use a 0
                     0000    354 ;       Connect Confirms  use the supplied value (i.e, the local link number)
                     0000    355 ;
                     0000    356 ;
                     0000    357 ; INPUTS:       R5      Logical-link UCB address
                     0000    358 ;               R3      IRP address
                     0000    359 ;--
                     0000    360 NET$CONNECT::                           ; Parse NCB
             0000    0000    361         .WORD   0                       ; Entry
                     0002    362
 00000004'EF   D4    0002    363         CLRL    NDI_PTR                 ; No NDI pointer yet
 00000008'EF   D4    0008    364         CLRL    OBI_PTR                 ; No OBI pointer yet
          56   D4    000E    365         CLRL    R6                      ; No ICB yet
                     0010    366         ;
                     0010    367         ;   Get the Network Connect Block (NCB) descriptor
                     0010    368         ;
 54   2C B3   D0    0010    369         MOVL    @IRP$L_SVAPTE(R3),R4                                    ; ABD ptr
 55   12 A4   3C    0014    370         MOVZWL  <ABD$C_LENGTH*ABD$C_NAME>+ABD$W_COUNT(R4),R5            ; NCB lth
 50   10 A4   9E    0018    371         MOVAB   <ABD$C_LENGTH*ABD$C_NAME>+ABD$W_TEXT(R4),R0             ; Offset
                     001C    372                                                                     ; to text
    54   80   9E    001C    373         MOVAB   (R0)+,R4                ; Copy the address and add 1
                     001F    374                                         ; for access mode field
    51   64   3C    001F    375         MOVZWL  (R4),R1                 ; Get offset to text
 54 50   51   C1    0022    376         ADDL3   R1,R0,R4                ; Point to device name string
    58   54   D0    0026    377         MOVL    R4,R8                   ; Copy name address
    57   55   D0    0029    378         MOVL    R5,R7                   ; Copy name size
    55   54   C0    002C    379         ADDL    R4,R5                   ; Point R5 past last NCB byte
                     002F    380         ;
                     002F    381         ;   Allocate an Internal Connect Block (ICB) to hold the parse
                     002F    382         ;   of the NCB.
                     002F    383         ;
  51   A3 8F   9A    002F    384         MOVZBL  #ICB$C_LENGTH,R1        ; Set block length
 00000000'EF   16    0033    385         JSB     NET$ALONPGD_Z           ; Allocate/zero from non-paged pool
       03 50   E8    0039    386         BLBS    R0,5$                   ; If error detected,
        0118   31    003C    387         BRW     ACCESS_DONE             ; then exit with error status in R0
     56   52   D0    003F    388 5$:     MOVL    R2,R6                   ; Copy ICB pointer
                     0042    389         ;
                     0042    390         ;   Init ICB values obtained from LNI data base
                     0042    391         ;
                     0042    392         ASSUME  CNR$L_FLINK  EQ  0
50   00000000'EF   D0    0042    393         MOVL    NET$GL_PTR_VCB,R0                               ; Point at the RCB
   04 A6   78 A0   B0    0049    394         MOVW    RCB$W_TIM_CNO(R0),ICB$W_TIM_OCON(R6)            ; Outbound connect timer
   06 A6   74 A0   B0    004E    395         MOVW    RCB$W_TIM_IAT(R0),ICB$W_TIM_INACT(R6)           ; Inactivity timer
   0C A6   63 A0   9B    0053    396         MOVZBW  RCB$B_ECL_RFA(R0),ICB$W_RETRAN(R6)              ; Max rexmission count
   0E A6   64 A0   9B    0058    397         MOVZBW  RCB$B_ECL_DFA(R0),ICB$W_DLY_FACT(R6)            ; Rexmt delay factor
   10 A6   65 A0   9B    005D    398         MOVZBW  RCB$B_ECL_DWE(R0),ICB$W_DLY_WGHT(R6)            ; Rexmt delay weight
   12 A6   7C A0   B0    0062    399         MOVW    RCB$W_ECLSEGSIZ(R0),ICB$W_SEGSIZ(R6)            ; Segment size
```

```
                                0067   400          ;
                                0067   401          ;
                                0067   402          ;   Enter the local process name using NSP format type 1 and the PID
                                0067   403          ;   converted to ascii as the counted string.  This is the default
                                0067   404          ;   which may be overridded below, and is compatible with earlier
                                0067   405          ;   releases.
                                0067   406          ;
 50   00000000'EF    D0  0067   407          MOVL    NET$GL_PTR_VCB,R0           ; Point to RCB
            66 A0    90  006E   408          MOVB    RCB$B_ECL_DAC(R0),-         ;
      0000001C'EF                0071   409                  NDI_B_ACC          ; Setup default NDI access
            67 A0    90  0076   410          MOVB    RCB$B_ECL_DPX(R0),-         ;
      0000001D'EF                0079   411                  OBI_B_PRX          ; Setup default OBI proxy access
                03    90  007E   412          MOVB    #NMA$C_ACES_BOTH,-          ; Setup default internal proxy access
      0000001E'EF                0080   413                  INT_B_PRX          ;
 52   00000000'EF    D0  0085   414          MOVL    NET$GL_SAVE_IRP,R2          ; Get current IRP
       4C A2         D0  008C   415          MOVL    R6,IRP$L_DIAGBUF(R2)        ; Save ICB for NETDRIVER
       50   0C A2    D0  0090   416          MOVL    IRP$L_PID(R2),R0            ; Get users PID
            58   08   D0  0094   417          MOVL    #8,R8                       ; Convert it to 8 ascii chars
       57   14 A6    9E  0097   418          MOVAB   ICB$B_LPRNAM(R6),R7         ; Get output pointer
            87   0B    90  009B   419          MOVB    #11,(R7)+                   ; Total size including counted
                               009E   420                                      ; ascii PID, object and format type
            87   01    B0  009E   421          MOVW    #1,(R7)+                    ; Format type 1, object type 0
            87   08    90  00A1   422          MOVB    #8,(R7)+                    ; Setup count field for PID
            57   08    C0  00A4   423          ADDL    #8,R7                       ; Point R7 past end of dst field
                 51    D4  00A7   424          CLRL    R1                          ; Clear high order dividend
 52   50     50   10    7B  00A9   425 10$:     EDIV    #16,R0,R0,R2                ; Divide by 16, get remainder
      77   0020'C2    90  00AE   426          MOVB    BIN_HEXASC(R2),-(R7)        ; Convert to ASCII and store
              F3 58    F5  00B3   427          SOBGTR  R8,10$                      ; Loop for 8 characters
                               00B6   428          ;
                               00B6   429          ;
                               00B6   430          ;   Parse the NCB
                               00B6   431          ;
             0109    30  00B6   432          BSBW    PRS_NCB                     ; Parse the NCB
           06 50     E9  00B9   433          BLBC    R0,20$                      ; If LBC then error
            0524     30  00BC   434          BSBW    CHECK_ACCESS                ; See if connect is allowed to node
           03 50     E8  00BF   435          BLBS    R0,30$                      ; If LBS then yes
            0092     31  00C2   436 20$:     BRW     ACCESS_DONE                 ; Exit
                         00C5   437 30$:     ;
                               00C5   438          ;
                               00C5   439          ;  If outbound proxy logins are allowed then identify the local
                               00C5   440          ;  process via format type 2 with the binary PID in the 'UIC' field
                               00C5   441          ;  and the username as the 12 byte counted string.
                               00C5   442          ;
                               00C5   443          $DISPATCH  TYPE=B,OBI_B_PRX -   ; Goto ACCESS_DONE if proxy disallowed
                               00C5   444          <-
                               00C5   445            <NMA$C_ACES_INCO, ACCESS_DONE>-
                               00C5   446            <NMA$C_ACES_NONE, ACCESS_DONE>-
                               00C5   447          >
                               00D1   448          $DISPATCH  TYPE=B,INT_B_PRX -   ; Goto ACCESS_DONE if proxy disallowed
                               00D1   449          <-
                               00D1   450            <NMA$C_ACES_INCO, ACCESS_DONE>-
                               00D1   451            <NMA$C_ACES_NONE, ACCESS_DONE>-
                               00D1   452          >
 52   00000000'EF    D0  00DD   453          MOVL    NET$GL_SAVE_IRP,R2          ; Get current IRP
       50   0C A2    D0  00E4   454          MOVL    IRP$L_PID(R2),R0            ; Get internal PID for process
      00000000'GF    16  00E8   455          JSB     G^EXE$IPID_TO_EPID          ; Convert to EPID format
            53   50    D0  00EE   456          MOVL    R0,R3                       ; Save EPID in R3
```

```
                50    DD   00F1   457          PUSHL   R0                      ; Push EPID on stack
             50 5E    D0   00F3   458          MOVL    SP,R0                   ; Get address of EPID
                               00F6   459          $GETJPI_S -
                               00F6   460              PIDADR = (R0),-     ; EPID of process of interest
                               00F6   461              EFN    = #NET$C_EFN_WAIT,- ; Event flag
                               00F6   462              IOSB   = JPI_Q_IOSB,- ; IOSB
                               00F6   463              ITMLST = JPI_ITEM_LIST ; Item list for return
             5E    04    C0   0111   464          ADDL    #4,SP                   ; Pop EPID off stack
                40 50    E9   0114   465          BLBC    R0,ACCESS_DONE          ; Br on error
                               0117   466          $WAITFR_S  EFN = #NET$C_EFN_WAIT; Wait for $GETJPI to finish
          30 00000020'EF    E9   0120   467          BLBC    JPI_Q_IOSB,ACCESS_DONE  ; Br on error
       50 00000028'EF    9A   0127   468          MOVZBL  JPI_B_UNAME,R0          ; Get string size
                   24    13   012E   469          BEQL    40$                     ; If EQL then skip this
             0C    50    91   0130   470          CMPB    R0,#12                  ; Maximum name in NSP is 16
                   1F    1A   0133   471          BGTRU   40$                     ; If GTRU then out of range
             57    14 A6   9E   0135   472          MOVAB   ICB$B_LPRNAM(R6),R7     ; Get output pointer
          87 50    07    81   0139   473          ADDB3   #7,R0,(R7)+             ; Total size including username, PID,
                               013D   474                                          ; object type, and format type
             87    02    B0   013D   475          MOVW    #2,(R7)+                ; Format type 2, object type 0
             87    53    D0   0140   476          MOVL    R3,(R7)+                ; Enter binary EPID in "UIC" field
             87    50    90   0143   477          MOVB    R0,(R7)+                ; Setup count field for username
             7E    54    7D   0146   478          MOVQ    R4,-(SP)                ; Save NCB descriptor
67 0000002C'EF    50    28   0149   479          MOVC3   R0,JPI_T_UNAME,(R7)     ; Move the username
             54    8E    7D   0151   480          MOVQ    (SP)+,R4                ; Restore NCB descriptor
             50    00'   D0   0154   481 40$:     MOVL    S^#SS$_NORMAL,R0        ; Setup status
                               0157   482                                          ;
                               0157   483 ACCESS_DONE:
       53 00000000'EF    D0   0157   484          MOVL    NET$GL_SAVE_IRP,R3      ; Recover IRP address
                11 50    E8   015E   485          BLBS    R0,10$                  ; Br if successful
             4C A3 50    3C   0161   486          MOVZWL  R0,IRP$L_DIAGBUF(R3)    ; Save error code for NETDRIVER
                50    56   D0   0165   487          MOVL    R6,R0                   ; Copy block address for deallocate
                   08    13   0168   488          BEQL    10$                     ; Br if none
          00000000'EF    16   016A   489          JSB     NET$DEALLOCATE          ; Deallocate the block
                   41    11   0170   490          BRB     100$                    ; Take common exit
             02 A6 B5    B5   0172   491 10$:     TSTW    ICB$W_LOCLNK(R6)        ; Connect Initiate or Confirm ?
                3C    12   0175   492          BNEQ    100$                    ; If NEQ, Confirm (or Reject)
                               0177   493          ;
                               0177   494          ;
                               0177   495          ;    A zero LOCLNK means that this is a Connect Initiate.  Allocate
                               0177   496          ;    an XWB and LLI and insert them in their respective databases.
                               0177   497          ;
                               0177   498          ;
          55    1C A3    D0   0177   499          MOVL    IRP$L_UCB(R3),R5        ; Get UCB address
          51    0C A3    D0   017B   500          MOVL    IRP$L_PID(R3),R1        ; Get PID
       53 008D C6    3C   017F   501          MOVZWL  ICB$W_REMNOD(R6),R3     ; Get remote node address
             50    07    D0   0184   502          MOVL    #NETUPD$_CRELNK,R0      ; Function code
          00000000'EF    16   0187   503          JSB     CALL_NETDRIVER          ; Tell Netdriver
             53    50    D0   018D   504          MOVL    R0,R3                   ; Get allocated XWB address
                   1F    18   0190   505          BGEQ    40$                     ; If GEQ, failed
                               0192   506          ;
             0048 8F    BB   0192   507          PUSHR   #^M<R3,R6>              ; Save XWB,ICB
          00000000'EF    16   0196   508          JSB     NET$PROC_XWB            ; Insert XWB, create LLI, etc.
             0048 8F    BA   019C   509          POPR    #^M<R3,R6>              ; Recover XWB,ICB
                0E 50    E9   01A0   510          BLBC    R0,40$                  ; If LBC, XWB was deallocated
                3E A3    B0   01A3   511          MOVW    XWB$W_LOCLNK(R3),-      ; Setup local link number
                02 A6        01A6   512                  ICB$W_LOCLNK(R6)        ;
                   09    11   01A8   513          BRB     100$                    ; Tack common exit
```

```
                          01AA   514
                          01AA   515                ;
                          01AA   516                ; Setup error code
                          01B1   517 40$:           ;& NO LONGER USED
                          01B1   518                ; Deal with the error
                          01B3   519 100$:          ;
                          01B3   520                ; Recover IRP address
                          01BA   521                ;
                          01BC   522                ; Give the IRP back to NETDRIVER
                          01C1   523
                          01C2   524
```

```
50  00000000'8F   D0      MOVL    #SS$_NOLINKS,R0
                  11      BRB     ACCESS_DONE
53  00000000'EF   D0      MOVL    NET$GL_SAVE_IRP,R3
                  A8      BISW    #NET$M_RQIRP,-
      00000000'EF                     NET$GL_FLAGS
                  04      RET
```

```
                                01C2    525 .SBTTL  PRS_NCB - Parse Network Connect Block
                                01C2    526 ;+
                                01C2    527 ;
                                01C2    528 ; INPUTS:       R6      Ptr to the ICB
                                01C2    529 ;               R5      Ptr to first byte beyond the NDB
                                01C2    530 ;               R4      Ptr to first byte in the NDB
                                01C2    531 ;
                                01C2    532 ;               All other registers are scratch
                                01C2    533 ;
                                01C2    534 ; OUTPUTS:      R6      Preserved
                                01C2    535 ;               R0      Status code
                                01C2    536 ;
                                01C2    537 ;-
                                01C2    538 PRS_NCB:
            FE3B'   30          01C2    539         BSBW    NET$GETUTLBUF           ; Obtain use of the utility buf
        5F 8F   64   91         01C5    540         CMPB    (R4),#^A"_"             ; Is there a prefixed underscore?
                02   12         01C9    541         BNEQ    20$                     ; If NEQ no
                54   D6         01CB    542         INCL    R4                      ; Pass over it
                47   10         01CD    543 20$:    BSBB    PRS_NODE                ; Parse nodename, get NDI block
              3D 50  E9         01CF    544         BLBC    R0,TOO$                 ; Br if error
        3C A6   01   8E         01D2    545         MNEGB   #1,ICB$B_ACCESS(R6)     ; Flag 'no access control yet'
              0207   30         01D6    546         BSBW    PRS_ACCESS              ; Parse access control field
              33 50  E9         01D9    547         BLBC    R0,TOO$                 ; Br if error
    84    3A3A 8F   B1         01DC    548         CMPW    #^A"::",(R4)+           ; Correct delimiter
                2D   12         01E1    549         BNEQ    200$                    ; Br if not
              024D   30         01E3    550         BSBW    PRS_OBJECT              ; Parse the target object name
              26 50  E9         01E6    551         BLBC    R0,TOO$                 ; Br if error
              03A7   30         01E9    552         BSBW    PRS_END                 ; Parse remainder of the NCB
              20 50  E9         01EC    553         BLBC    R0,TOO$                 ; Br if error
        3C A6   FF 8F   91      01EF    554         CMPB    #-1,ICB$B_ACCESS(R6)    ; Any access control yet ?
                06   12         01F4    555         BNEQ    50$                     ; If NEQ then yes
              0456   30         01F6    556         BSBW    DFLT_ACCESS             ; Use the default
              13 50  E9         01F9    557         BLBC    R0,100$                 ; Br if error
            008D C6  B5         01FC    558 50$:    TSTW    ICB$W_REMNOD(R6)        ; Address = 0 ?
                0D   12         0200    559         BNEQ    100$                    ; If not, branch
                                0202    560                                         ; Else use the local address
    51  00000000'EF   D0         0202    561         MOVL    NET$GL_PTR_VCB,R1       ; Get RCB
                0E A1   B0      0209    562         MOVW    RCB$W_ADDR(R1),-        ;
            008D C6             020C    563                 ICB$W_REMNOD(R6)        ; Store local address
                    05          020F    564 100$:   RSB
                                0210    565
        50  0000'8F   3C          0210    566 200$:   MOVZWL  #SS$_IVDEVNAM,R0        ; Setup error code
                    05          0215    567         RSB                             ; Return error
```

```
                                0216   569 .SBTTL  PRS_NODE        - Parse NCB nodename
                                0216   570 ;+
                                0216   571 ;
                                0216   572 ; Parse the node identifier and find the appropriate NDI block.  If all
                                0216   573 ; numerics then convert from decimal to binary and use the NDI with the
                                0216   574 ; same address and null assoc. line (if not found then use null NDI).
                                0216   575 ;
                                0216   576 ; If the number is zero or the nodename is unspecified then treat as if
                                0216   577 ; the local nodename were used.  The local node number is always stored
                                0216   578 ; as a zero in all NDI blocks -- the actual local node number is found
                                0216   579 ; in the LNI block.
                                0216   580 ;
                                0216   581 ; The parse does not include the terminator which may be '' or ::
                                0216   582 ;
                                0216   583 ; INPUTS:       R6      Ptr to the ICB
                                0216   584 ;               R5      Ptr to first byte beyond the NDB
                                0216   585 ;               R4      Ptr to first byte in the NDB
                                0216   586 ;
                                0216   587 ;               All other are scratch
                                0216   588 ;
                                0216   589 ; OUTPUTS:      R6      Preserved
                                0216   590 ;               R5      Preserved
                                0216   591 ;               R4      Advance by bytes parsed
                                0216   592 ;               R0      Status code
                                0216   593 ;
                                0216   594 ;               ICB$W_REMNOD    Remote Node address -- 0 if its the local node
                                0216   595 ;               ICB$W_PATH      Path index of line to use to get to node.
                                0216   596 ;               NDI_PTR         Address of NDI CNF or 0 if none
                                0216   597 ;
                                0216   598 PRS_NODE:                                ; Parse NCB nodename
                          66    B4  0216   599           CLRW    ICB$W_PATH(R6)      ; Assume path zero
                        59      9A  0218   600           MOVZBL  S^#NET$C_MAXNODNAM,R9 ; Indicate max size of nodename
                58  00000000'EF  D0  021B   601           MOVL    NET$GL_UTLBUF,R8    ; Point to output buffer
                        054D    30  021E   602           BSBW    GET_STR_NUM         ; Returns:
                                    0221   603                                       ; R8  name pointer
                                    0221   604                                       ; R7  name string size
                                    0221   605                                       ; R4  advanced by chars parsed
                                    0221   606                                       ; R3  garbage
                                    0221   607                                       ; R2  numeric value if LBS in R1
                                    0221   608                                       ;     zero if null string
                                    0221   609                                       ; R1  LBC if ascii string
                                    0221   610                                       ;     LBS if numeric or null
                                    0221   611                                       ; R0  garbage
                                    0221   612
                5B  00000000'EF     D0  0221   613           MOVL    NET$GL_CNR_NDI,R11  ; Setup root of NDI list
                            5A      D4  0228   614           CLRL    R10                 ; Indicate no current NDI
                          36 51     E9  022A   615           BLBC    R1,40$              ; Br if Ascii nodename
                       2E    64     91  022D   616           CMPB    (R4),#^A"."         ; Is it of the form "area.node"?
                             1A     12  0230   617           BNEQ    20$                 ; If not, use the number as the node
                             54     D6  0232   618           INCL    R4                  ; Skip the delimiter
                             52     DD  0234   619           PUSHL   R2                  ; Save area number
                        0535        30  0236   620           BSBW    GET_STR_NUM         ; Get the node number within area
                             53 8ED0    0239   621           POPL    R3                  ; Restore area number
                          08 51     E8  023C   622           BLBS    R1,10$              ; If numeric, then it's ok
                    50  0000'8F     3C  023F   623           MOVZWL  #SS$_IVDEVNAM,R0    ; Setup error code
                        018D        31  0244   624           BRW     160$                ; Report the error
                       0A   53      F0  0247   625 10$:      INSV    R3,#TR4$V_ADDR_AREA,-   ; Combine area and node number
```

```
            52   06        024E                    #TR4$S_ADDR_AREA,R2
   59  00000000'EF   D0    0250     20$:   MOVL    NET$GL_PTR_VCB,R9          ; Get RCB
         0E A9   52  B1    0257            CMPW    R2,RCB$W_ADDR(R9)          ; Is this the local node?
                 02  12    025B            BNEQ    30$                        ; Br if address not local
                 52  D4    025D            CLRL    R2                         ; 0 is used to indicate the local node
                           025F            ;
                           025F            ;   The node has been specified by address in the NCB.  Attempt to find
                           025F            ;   the associated NCB and continue.
                           025F            ;
            58   52  D0    025F     30$:   MOVL    R2,R8                      ; Use as search value
               FD9B'  30   0262            BSBW    NET$NDI_BY_ADD             ; Find the NDI with matching address
                 27  11    0265            BRB     60$                        ; R10 = NDI address, 0 if no match
                           0267            ;
                           0267            ;   The node has been specified by name in the NCB.   Find the NDI.  If
                           0267            ;   its not there return an error since we cannot determine the node
                           0267            ;   address.
                           0267            ;
      50    0000'8F  3C    0267     40$:   MOVZWL  #SS$_NOSUCHNODE,R0         ; Establish error code
                           026C            $SEARCH eql,ndi,s,nna              ; Find the NDI block
             03 50   E8    027B            BLBS    R0,50$                     ; If LBS then found
              0157   31    027E            BRW     160$                       ; ...else return error
                           0281     50$:   $GETFLD ndi,l,add                  ; Get node address - its always there
                           028E                                               ; and its value is 0 for the local node
                           028E     60$:   ;
                           028E            ;   At this point  R8  = node address (zero if local)
                           028E            ;                  R10 = NDI block address (zero if none)
                           028E            ;
                           028E            ;   NOTE:  At this point, R8 may not be a "normalized" address,
                           028E            ;   which means that if the area number was not specified, the
                           028E            ;   homearea has not yet been defaulted!
                           028E            ;
      008D C6    58  B0    028E            MOVW    R8,ICB$W_REMNOD(R6)        ; Store the address
  00000004'EF    5A  D0    0293            MOVL    R10,NDI_PTR                ; Save the NDI CNF pointer
                 17  13    029A            BEQL    70$                        ; If EQL then none
                           029C            $GETFLD ndi,l,acc                  ; Get access state
             07 50   E9    02A9            BLBC    R0,70$                     ; If LBC then not set
  0000001C'EF    58  90    02AC            MOVB    R8,NDI_B_ACC               ; Else override default
                           02B3     70$:   ;
                           02B3            ;   See if node is reachable
                           02B3            ;
   51  00000000'EF   D0    02B3            MOVL    NET$GL_PTR_VCB,R1          ; Get RCB address
      52   008D C6   3C    02BA            MOVZWL  ICB$W_REMNOD(R6),R2        ; Get node address
                 5A  13    02BF            BEQL    100$                       ; If zero, then skip this
                 0A  EF    02C1            EXTZV   #TR4$V_ADDR_AREA,-         ; Get the remote area number
      50    52   06        02C3                    #TR4$S_ADDR_AREA,R2,R0
                 0B  12    02C6            BNEQ    80$                        ; If area = 0, then use our area
         008B C1     F0    02C8            INSV    RCB$B_HOMEAREA(R1),-       ; Always enforce our area set in
                 0A        02CC                    #TR4$V_ADDR_AREA,-         ; node addr, so that returning NSP
      008D C6    06        02CD                    #TR4$S_ADDR_AREA,ICB$W_REMNOD(R6) ; msgs match on node addr
                 07  11    02D1            BRB     90$                        ; Check node reachability
      008B C1    50  91    02D3     80$:   CMPB    R0,RCB$B_HOMEAREA(R1)      ; Our area?
                 41  12    02D8            BNEQ    100$                       ; If not, skip reachability check
      05   008A C1   91    02DA     90$:   CMPB    RCB$B_ETY(R1),#ADJ$C_PTY_PH4N ; Are we an endnode?
                 2A  12    02DF            BNEQ    95$                        ; If not, do reachability check
                           02E1            ;
                           02E1            ;   If the remote node is an endnode, there is only one adjacency
                           02E1            ;   available. If that circuit has a buffer size larger than the
```

```
                                 02E1   683          ;   executor buffer size, we can gain some throughput by making the
                                 02E1   684          ;   link nonadaptive and offering to use the larger buffer size.
                                 02E1   685          ;   However, we can only do this if we are certain that the target
                                 02E1   686          ;   is one hop away. The only way to do this is to ask NETDRIVER to
                                 02E1   687          ;   find it in the cache. If it's not in the cache, we don't know
                                 02E1   688          ;   that it's one hop away, and we don't offer a big buffer.
                                 02E1   689          ;
                    0FFC 8F      BB 02E1   690          PUSHR   #^M<R2,R3,R4,R5,R6,R7,R8,R9,R10,R11> ; Save registers
            53   00000000'EF     D0 02E5   691          MOVL    NET$GL_SAVE_IRP,R3      ; Recover IRP address
                 55    1C A3     D0 02EC   692          MOVL    IRP$L_DCB(R3),R5        ; Get network UCB address
                       54   52   D0 02F0   693          MOVL    R2,R4                   ; Get node address of target
                       52   51   D0 02F3   694          MOVL    R1,R2                   ; Copy RCB address
                       50   0F   D0 02F6   695          MOVL    #NETUPD$_TEST_ADJ,R0    ; Function code
                 00000000'EF    16 02F9   696          JSB     CALL_NETDRIVER          ; Tell Netdriver
                       1F 50    E9 02FF   697          BLBC    R0,1T5$                 ; If LBC, target not in cache
                                 0302   698          ;
                                 0302   699          ; We have ascertained that the target node is one hop away.
                                 0302   700          ; Join common code to decide whether to offer a larger buffer.
                                 0302   701          ;
            58    00AA C2        3C 0302   702          MOVZWL  RCB$W_DRT(R2),R8        ; Get ADJ index for designated router
                        18      13 0307   703          BEQL    115$                    ; If EQL, none: don't bother
                        2E      11 0309   704          BRB     125$                    ; Join common code
                                 030B   705          ;
                                 030B   706          ;   Node is a router. Test reachability of target.
                                 030B   707          ;
                      FCF2'      30 030B   708 95$:     BSBW    NET$TEST_REACH          ; Is node reachable ?
                     0D 50       E9 030E   709          BLBC    R0,110$                 ; If LBC then no
                                 0311   710          ;
                                 0311   711          ;   If the remote node is an adjacent Phase II node, then
                                 0311   712          ;   "tie" the logical link to the circuit for the life of
                                 0311   713          ;   the logical link, thus making it "non-adaptive".
                                 0311   714          ;
      02    51    10    10     ED 0311   715          CMPZV   #16,#16,R1,#ADJ$C_PTY_PH2 ; Is the remote a Phase II node?
                        0F      12 0316   716          BNEQ    120$                    ; If NEQ no
                     66   51    B0 0318   717          MOVW    R1,ICB$W_PATH(R6)       ; Else stuff the path ID
                        007E    31 031B   718 100$:     BRW     140$                    ; Branch forward
                                 031E   719
                        00B7    31 031E   720 110$:     BRW     160$                    ; Take common exit
                                 0321   721
                    0FFC 8F      BA 0321   722 115$:     POPR    #^M<R2,R3,R4,R5,R6,R7,R8,R9,R10,R11> ; Restore registers
                        F4      11 0325   723          BRB     100$                    ; Branch "forward"
                                 0327   724          ;
                                 0327   725          ;   If the remote node is adjacent (hops=1), and the line buffer
                                 0327   726          ;   size parameter is set higher than the executor buffer size,
                                 0327   727          ;   then "tie" all logical links to the circuit for the life
                                 0327   728          ;   of the logical link, thus making it "non-adaptive".  This
                                 0327   729          ;   is so that the logical link can use a larger buffer size
                                 0327   730          ;   for more optimal performance over the circuit.
                                 0327   731          ;
FFFFFFFF 8F   51    10    10     EC 0327   732 120$:     CMPV    #16,#16,R1,#ADJ$C_PTY_UNK ; Is the node 1 hop away?
                        E9      13 0330   733          BEQL    100$                    ; If not, skip it
                    0FFC 8F      BB 0332   734          PUSHR   #^M<R2,R3,R4,R5,R6,R7,R8,R9,R10,R11> ; Save registers
                     58   51     3C 0336   735          MOVZWL  R1,R8                   ; Get ADJ index
                        FCC4'    30 0339   736 125$:     BSBW    NET$FIND_ADJ            ; Lookup ADJ & LPD addresses
                       59 50     E9 033C   737          BLBC    R0,130$                 ; Skip if not found for some reason
                     55   56     D0 033F   738          MOVL    R6,R5                   ; Save LPD address
                  58    28 A5     9A 0342   739          MOVZBL  LPD$B_PLVEC(R5),R8      ; Get PLVEC index
```

```
                                                J 6
5B   00000000'EF   D0  0346   740          MOVL    NET$GL_CNR_PLI,R11      ; Point to line database
            5A     D4  034D   741          CLRL    R10                     ; Starting at beginning
                       034F   742          $SEARCH egl,pli,l,plvec         ; Search for corresponding line
          37 50    E9  035E   743          BLBC    R0,130$                 ; Skip if none found
                       0361   744          $GETFLD pli,l,bfs               ; Get line buffer size, if any
          27 50    E9  036E   745          BLBC    R0,130$                 ; Skip if not set
       58   25     C2  0371   746          SUBL    #TR$C_MAXHDR+NSP$C_MAXHDR,R8 ; Compute possible maximum
                       0374   747                                          ; segment size
51   00000000'EF   D0  0374   748          MOVL    NET$GL_PTR_VCB,R1       ; get address of RCB
     7C A1   58    B1  037B   749          CMPW    R8,RCB$W_ECLSEGSIZ(R1)  ; check for segment size (R8) same
                       037F   750                                          ; ... as executor buffer size
            17     13  037F   751          BEQL    130$                    ; if equal, don't force fixed path
                       0381   752          ;
                       0381   753          ;  If an end node, DON'T lock the path (don't want to use DR).
                       0381   754          ;
05     008A C1    91  0381   755          CMPB    RCB$B_ETY(R1),#ADJ$C_PTY_PH4N ; Is this node an end node?
            10     13  0386   756          BEQL    130$                    ; If EQL, yes - don't force fixed path
      56    10 AE   D0  0388   757          MOVL    4*4(SP),R6              ; Restore ICB address
      66    20 A5   B0  038C   758          MOVW    LPD$W_PTH(R5),ICB$W_PATH(R6)    ; Stuff the path ID
      12 A6    58   B0  0390   759          MOVW    R8,ICB$W_SEGSIZ(R6)     ; Set larger segment buffer size
      06 A6    1E   B0  0394   760          MOVW    #30,ICB$B_TIM_INACT(R6) ; Lower inactivity timer (&& need symbol)
         0FFC  8F   BA  0398   761 130$:    POPR    #^M<R2,R3,R4,R5,R6,R7,R8,R9,R10,R11> ; Restore registers
                       039C   762          ;
                       039C   763          ;  If the node entry specifies an explicit output circuit, then
                       039C   764          ;  force all I/O to use that circuit, overriding automatic routing.
                       039C   765          ;
00000004'EF    D5  039C   766 140$:    TSTL    NDI_PTR                 ; Is there an NDI block ?
            31     13  03A2   767          BEQL    150$                    ; If EQL no, we're done
                       03A4   768          $GETFLD ndi,s,nli               ; Get name of node's designated line
          21 50    E9  03B1   769          BLBC    R0,150$                 ; If none specified use path 0
5B   00000000'EF   D0  03B4   770          MOVL    NET$GL_CNR_CRI,R11      ; Get root of DLI list
            5A     D4  03BB   771          CLRL    R10                     ; Indicate no current CNF
                       03BD   772          $SEARCH egl,cri,s,nam           ; Find the CRI block
          0A 50    E9  03CC   773          BLBC    R0,170$                 ; If LBC then not found
      66    12 AA   B0  03CF   774          MOVW    CNF$W_ID(R10),ICB$W_PATH(R6) ; Establish the LPD i.d.
            04     13  03D3   775          BEQL    170$                    ; If no LPD for this circuit, error
       50   00'    D0  03D5   776 150$:    MOVL    S^#SS$_NORMAL,R0        ; Indicate success
                  05  03D8   777 160$:    RSB
                       03D9   778
   50   0000'8F    3C  03D9   779 170$:    MOVZWL  #SS$_DEVOFFLINE,R0      ; Loop circuit cannot be found
            F8     11  03DE   780          BRB     160$
```

```
                     03E0   782 .SBTTL  PRS_ACCESS      - Parse NCB access control fields
                     03E0   783 ;+
                     03E0   784 ;
                     03E0   785 ; Parse the optional access control fields including the begining and
                     03E0   786 ; ending delimiter (" only)
                     03E0   787 ;
                     03E0   788 ; INPUTS:        R6      ICB pointer
                     03E0   789 ;                R5      Pointer to 1st byte past NCB
                     03E0   790 ;                R4      Pointer to next byte to be parsed
                     03E0   791 ;
                     03E0   792 ;                All other regs are scratch
                     03E0   793 ;
                     03E0   794 ; OUTPUTS:       R6,R5   Preserved
                     03E0   795 ;                R4      Updated by number of bytes parsed
                     03E0   796 ;                R0      Routine status code
                     03E0   797 ;
                     03E0   798 ;                All other regs are garbage
                     03E0   799 ;
                     03E0   800 ;                ICB$B_ACCESS,ICB$T_ACCESS are setup if the optional
                     03E0   801 ;                fields are present
                     03E0   802 ;-
                     03E0   803 PRS_ACCESS:                                  ; Parse NCB access control fields
          64   22    91   03E0   804         CMPB    #^A'"',(R4)             ; Access control specified ?
               4A    12   03E3   805         BNEQ    20$                     ; If not, branch
               00    90   03E5   806         MOVB    #NMA$C_ACES_NONE,-      ; Disable proxy access
     0000001E'EF          03E7   807                 INT_B_PRX               ;
               84    95   03EC   808         TSTB    (R4)+                   ; Skip over delimiter (")
      58   3E A6    9E   03EE   809         MOVAB   ICB$T_ACCESS+1(R6),R8   ; Setup destination field - leave
                          03F2   810                                         ; room for count of first subfield
          59   3F    D0   03F2   811         MOVL   #ICB$C_ACCESS-1,R9       ; Setup size of dest field
                          03F5   812                                         ; C_ACCESS includes B_ACCESS
   53   00000230'EF    9E   03F5   813         MOVAB   NET$AB_ACC_TAB,R3       ; Setup translation table
                          03FC   814         ;
                          03FC   815         ;   Note that here ICB$B_ACCESS is cleared -- there was a -1 in it to
                          03FC   816         ;   signal "no access control yet".  If the user explicitly specifies
                          03FC   817         ;   null access control, e.g., node'"'::taskspecifier, then ICB$B_ACCESS
                          03FC   818         ;   will remain zero.  A -1 at the end of the parse would signal a need
                          03FC   819         ;   to supply the default access control.  It is important that null
                          03FC   820         ;   access control strings can be explicitly requested by the user
                          03FC   821         ;   so that the node receiving the connect can supply default inbound
                          03FC   822         ;   access info.
                          03FC   823         ;
            3C A6    94   03FC   824         CLRB    ICB$B_ACCESS(R6)        ; Init access string size
         5B   03    9A   03FF   825         MOVZBL  #3,R11                  ; Setup loop counter
              039D  30   0402   826 10$:     BSBW    GET_TOKEN               ; Get user id
       FF A8   57    90   0405   827         MOVB    R7,-1(R8)               ; Enter count of subfield
               57    96   0409   828         INCB    R7                      ; Account for count field
       3C A6   57    80   040B   829         ADDB    R7,ICB$B_ACCESS(R6)     ; Bump total bytes in strings
          58   57    C0   040F   830         ADDL    R7,R8                   ; Advance output pointer - note that
                          0412   831                                         ; R7 pts to first block after count
                          0412   832                                         ; for next subfield
          59   57    C2   0412   833         SUBL    R7,R9                   ; Adjust bytes left in buffer
   50   0000'8F    3C   0415   834         MOVZWL  #SS$_INVLOGIN,R0        ; Assume access fields too long
          57   27    B1   041A   835         CMPW    S^#NET$C_MAXACCFLD,R7   ; Access subfield within range?
               13    1F   041D   836         BLSSU   30$                     ; If GTRU then too large
            E0 5B    F5   041F   837         SOBGTR  R11,10$                 ; Get next string
              039E   30   0422   838         BSBW    SCAN_BLANKS             ; Scan blanks and tabs
```

```
                50  0000'8F   3C  0425   839          MOVZWL  #SS$_IVDEVNAM,R0       ; Assume NCB format error
                    84    22   91  042A   840          CMPB    #^A'"',(R4)+          ; Is next character a quote ?
                          03   12  042D   841          BNEQ    30$                   ; Illegal NCB if NEQ
                    50    00'  D0  042F   842 20$:     MOVL    S^#SS$_NORMAL,R0      ; Indicate success
                               05  0432   843 30$:     RSB
```

```
                     0433   845 .SBTTL  PRS_OBJECT      - Parse NCB target task identifier
                     0433   846 ;+
                     0433   847 ;
                     0433   848 ; The taskname specifier is parsed, the OBI block located, and the
                     0433   849 ; ICB destination task fields setup.  The legal taskname formats are:
                     0433   850 ;
                     0433   851 ;       "objectname=
                     0433   852 ;       "objectnumber=
                     0433   853 ;       "TASK=taskname
                     0433   854 ;       "0=taskname
                     0433   855 ;
                     0433   856 ; The parse includes the parse of the leading " but does not include
                     0433   857 ; the terminating delimiter since it may vary.
                     0433   858 ;
                     0433   859 ; INPUTS:       R6      ICB pointer
                     0433   860 ;               R5      Points past NCB
                     0433   861 ;               R4      Points to next unparsed byte in NCB
                     0433   862 ;
                     0433   863 ;               All other registers are scratch
                     0433   864 ;
                     0433   865 ; OUTPUTS:      R6,R5   Preserved
                     0433   866 ;               R4      Updated to point to next unparsed byte
                     0433   867 ;               R0      Routine status
                     0433   868 ;               All other registers are garbage
                     0433   869 ;
                     0433   870 ;               ICB destination task fields are setup
                     0433   871 ;
                     0433   872 ;               OBI_PTR points the OBI CNF
                     0433   873 ;                       0 if taskname specified by number and the
                     0433   874 ;                         corresponding OBI entry is not found
                     0433   875 ;-
                     0433   876 PRS_OBJECT:                                  ; Parse NCB target taskname
          0000000C'EF   7C   0433   877         CLRQ    OBJ_Q_DESC          ; Init the object descriptor
          00000014'EF   7C   0439   878         CLRQ    TSK_Q_DESC          ; Init the task descriptor
       5B 00000000'EF   D0   043F   879         MOVL    NET$GL_CNR_OBI,R11  ; Setup root of OBI list
                             0446   880         ;
                             0446   881         ;
                             0446   882         ;   Locate begining of object specifier
                             0446   883         ;
                        037A 30   0446   884         BSBW    SCAN_BLANKS         ; Skip blanks and tabs
                     84   22 91   0449   885         CMPB    #^A'"',(R4)+        ; Correct delimiter
                          6E 12   044C   886         BNEQ    17$                 ; If NEQ no, may be some other field
                             044E   887         ;
                             044E   888         ;
                             044E   889         ;   Locate object name or number -- that part before the "=" delimiter
                             044E   890         ;
                       59    0C 9A   044E   891         MOVZBL  S^#NET$C_MAXOBJNAM,R9 ; Set max field size
                 58 00000000'EF   D0   0451   892         MOVL    NET$GL_UTLBUF,R8    ; Setup output buffer address
                 00000010'EF    54 D0   0458   893         MOVL    R4,OBJ_Q_DESC+4     ; Point to begining of object specifier
                        0310 30   045F   894         BSBW    GET_STR_NUM         ; Get ascii string or binary value
0000000C'EF      54 00000010'EF   C3   0462   895         SUBL3   OBJ_Q_DESC+4,R4,-   ; Complete descriptor by calculating
                             046E   896                 OBJ_Q_DESC          ; the string size
                          5A D4   046E   897         CLRL    R10                 ; Indicate no current CNF
                          50 D4   0470   898         CLRL    R0                  ; Preset return error flag
                       22 51 E9   0472   899         BLBC    R1,10$              ; Br unless specified by number
                 000000FF 8F   52 D1   0475   900         CMPL    R2,#NET$C_MAX_OBJ   ; Object # within range ?
                          3B 1A   047C   901         BGTRU   15$                 ; If GTRU then out of range
```

```
                                                     N 6
                                047E   902          ;
                                047E   903          ;
                                047E   904          ;   Locate OBI block.  This block is not required if the object number
                                047E   905          ;   was specified and it was non-zero.  Else it is needed to continue.
                                047E   906          ;
                     58   52   D0  047E   907          MOVL    R2,R8                   ; Setup search key value
                                0481   908          $SEARCH egl,obi,l,num           ; Find the matching OBI block
                       2C 50   E8  0490   909          BLBS    R0,20$                  ; If LBS then it was found
                          5A   D4  0493   910          CLRL    R10                     ; Else nullify OBI CNF pointer
                          28   11  0495   911          BRB     20$                     ; Continue in common
                                0497   912  10$:    $SEARCH egl,obi,s,nam           ; Find the macthing OBI CNF
                       10 50   E9  04A6   913          BLBC    R0,15$                  ; If LBC then not found
                                04A9   914          $GETFLD obi,l,num               ; Get the number
                       06 50   E8  04B6   915          BLBS    R0,20$                  ; Okay if LBS
                        00CB   31  04B9   916  15$:    BRW     200$                    ; Else, exit with "no such object"
                        00CE   31  04BC   917  17$:    BRW     300$                    ; Exit with "invalid device (NCB) name"
          00000008'EF    5A   D0  04BF   918  20$:    MOVL    R10,OBI_PTR             ; Setup CNF pointer
                                04C6   919          ;
                                04C6   920          ;
                                04C6   921          ;   Make sure an "=" sign follows the object specifier
                                04C6   922          ;
                        02FA   30  04C6   923          BSBW    SCAN_BLANKS             ; Skip over blanks and tabs
                     84   3D   91  04C9   924          CMPB    #^A'=',(R4)+            ; Is correct delimiter there ?
                          EE   12  04CC   925          BNEQ    17$                     ; If NEQ then incorrect
                                04CE   926          ;
                                04CE   927          ;
                                04CE   928          ;   Setup the ICB remote task desciption
                                04CE   929          ;
                       29 A6    94  04CE   930          CLRB    ICB$B_DSTFMT(R6)        ; Assume format type zero
                       2B A6    94  04D1   931          CLRB    ICB$T_DSTDSC(R6)        ; Nullify ascii object string
                    28 A6    02   90  04D4   932          MOVB    #2,ICB$B_RPRNAM(R6)     ; Account for format,object type
                    2A A6    58   90  04D8   933          MOVB    R8,ICB$B_DSTOBJ(R6)     ; Enter object type
                             4A   12  04DC   934          BNEQ    40$                     ; If NEQ then type is not TASK
                    29 A6    01   90  04DE   935          MOVB    #1,ICB$B_DSTFMT(R6)     ; Format type 1
                53  00000130'EF   9E  04E2   936          MOVAB   NET$AB_OBJTRAN,R3       ; Setup translation table
                    58    2C A6   9E  04E9   937          MOVAB   ICB$T_DSTDSC+1(R6),R8   ; Setup dest. string pointer
                       59    10   D0  04ED   938          MOVL    #ICB$C_RPRNAM-4,R9      ; Setup size of dest. field
                                04F0   939                                              ; (-3 for DSTFMT,DSTOBJ, taskname
                                04F0   940                                              ;  count and ICB$_RPRNAM fields)
                          02AF   30  04F0   941          BSBW    GET_TOKEN               ; Scan blanks and move string
                00000014'EF    57   7D  04F3   942          MOVQ    R7,TSK_Q_DESC           ; Setup taskname descriptor
                    2B A6    57   90  04FA   943          MOVB    R7,ICB$T_DSTDSC(R6)     ; Store taskname length in ICB
                             03   12  04FE   944          BNEQ    30$                     ; If not null then good task i.d.
                          0084   31  0500   945          BRW     200$                    ; Else, illegal task i.d.
              28 A6    57   03   81  0503   946  30$:    ADDB3   #3,R7,ICB$B_RPRNAM(R6)  ; Set total RPRNAM length
                                0508   947          ;
                                0508   948          ;
                                0508   949          ;   The connect is to object number 0.
                                0508   950          ;
                                0508   951          ;   Since there may be many OBI entries for object number 0 (TASK),
                                0508   952          ;   see if there is one which matches the qualifying taskname.  If so,
                                0508   953          ;   use it instead of the generic TASK OBI.
                                0508   954          ;
                             5A   DD  0508   955          PUSHL   R10                     ; Save the TASK OBI
                             5A   D4  050A   956          CLRL    R10                     ; Nullify OBI CNF pointer
                                050C   957          $SEARCH egl,obi,s,nam           ; See if there's an OBI with this name
                          03 50   E9  051B   958          BLBC    R0,35$                  ; If LBC then no
```

```
                6E   5A   D0  051E   959                 MOVL    R10,(SP)                ; Overly the OBI pointer on the stack
     00000008'EF 8ED0  0521   960 35$:                 POPL    OBI_PTR                 ; Update the official OBI pointer
                       0528   961 40$:                 ;
                       0528   962                      ;
                       0528   963                      ;  Setup the proxy login state for this OBI
                       0528   964                      ;
5A   00000008'EF   D0  0528   965                      MOVL    OBI_PTR,R10             ; Get the OBI
                17   13  052F   966                      BEQL    60$                     ; If EQL then none
                       0531   967                      $GETFLD obi,l,prx               ; Get proxy login state
              07 50   E9  053E   968                      BLBC    R0,60$                  ; If LBC then none
0000001D'EF     58   90  0541   969                      MOVB    R8,OBI_B_PRX            ; Else override the default
                       0548   970 60$:                 ;
                       0548   971                      ;
                       0548   972                      ;  Setup the remote user i.d. (RID) for display purposes.  If the
                       0548   973                      ;  target number is zero then use the taskname from the NCB.  Else,
                       0548   974                      ;  use the object name from the OBI -- if no OBI use the object
                       0548   975                      ;  name/number from the NCB.
                       0548   976                      ;
                3E   BB  0548   977                      PUSHR   #^M<R1,R2,R3,R4,R5>     ; Save regs
57   00000014'EF   7D  054A   978                      MOVQ    TSK_Q_DESC,R7           ; Setup taskname descriptor assuming
                       0551   979                                                      ; object type 0
      50   2A A6   90  0551   980                      MOVB    ICB$B_DSTOBJ(R6),R0     ; Get object number
                1D   13  0555   981                      BEQL    80$                     ; If EQL then use taskname
57   0000000C'EF   7D  0557   982                      MOVQ    OBJ_Q_DESC,R7           ; Get object name/number descriptor
5A   00000008'EF   D0  055E   983                      MOVL    OBI_PTR,R10             ; Get OBI pointer
                0D   13  0565   984                      BEQL    80$                     ; If EQL none, use object name/number
                       0567   985                                                      ; from NCB
                       0567   986                      $GETFLD obi,s,nam               ; Else use object name from NCB
     0092 C6   57   90  0574   987 80$:                 MOVB    R7,ICB$B_RID(R6)        ; Setup text field length
     20   68   57   2C  0579   988                      MOVC5   R7,(R8),#^A" "-         ; Move the text
     0093 C6   10       057D   989                              #ICB$C_RID,ICB$T_RID(R6);
                3E   BA  0581   990                      POPR    #^M<R1,R2,R3,R4,R5>     ; Restore regs
                       0583   991                      ;
                       0583   992                      ;
                       0583   993                      ;  Done, return to caller
                       0583   994                      ;
     50   00'   D0  0583   995                      MOVL    S^#SS$_NORMAL,R0        ; Indicate success
                05  0586   996 100$:                 RSB                             ; Done
                       0587   997                      ;
50   0000'8F   3C  0587   998 200$:                 MOVZWL  #SS$_NOSUCHOBJ,R0       ; Indicate error
                05  058C   999                      RSB                             ; Done
                       058D  1000                      ;
50   0000'8F   3C  058D  1001 300$:                 MOVZWL  #SS$_IVDEVNAM,R0        ; Assume NCB format error
                05  0592  1002                      RSB                             ; Done
```

```
                        0593  1004 .SBTTL  PRS_END - Parse the remainder of the NCB
                        0593  1005 ;+
                        0593  1006 ;
                        0593  1007 ; Find the link i.d. and optional data.  If none specified then this is
                        0593  1008 ; a "connect initiate".
                        0593  1009 ;
                        0593  1010 ; *** tbs ****  (R4 -> next input char,  R5 -> past end of NCB)
                        0593  1011 ;-
                        0593  1012 PRS_END:                                    ; Parse remainder of the NCB
                 7C A6   94   0593  1013         CLRB    ICB$B_DATA(R6)        ; Assume no optional data
                 02 A6   B4   0596  1014         CLRW    ICB$W_LOCLNK(R6)      ; Assume connect initiate
                   0227  30   0599  1015         BSBW    SCAN_BLANKS           ; Scan past tabs,blanks
              64    2F   91   059C  1016         CMPB    #^A"7",(R4)           ; Is the 'tail' of the NCB here
                    08   13   059F  1017         BEQL    5$                    ; If EQL yes, parse it
              64    22   91   05A1  1018         CMPB    #^A"""",(R4)          ; Is NCB delimiter next?
                    29   13   05A4  1019         BEQL    10$                   ; If EQL yes, check for end of NCB
                 0034  31   05A6  1020         BRW     20$                   ; Else NCB is malformed
                    84   95   05A9  1021 5$:     TSTB    (R4)+                 ; Skip over "/"
           02 A6    84   B0   05AB  1022         MOVW    (R4)+,ICB$W_LOCLNK(R6) ; Enter local link id
              64    22   91   05AF  1023         CMPB    #^A"""",(R4)          ; Is NCB delimiter next ?
                    1B   13   05B2  1024         BEQL    10$                   ; If EQL yes, chk for legal NCB
           50    0000'8F   3C   05B4  1025         MOVZWL  #SS$_TOOMUCHDATA,R0   ; Assume error
                 51   64   9A   05B9  1026         MOVZBL  (R4),R1               ; Get optional data count field
                 10   51   91   05BC  1027         CMPB    R1,#16                ; Check length of optional data
                      1C   1A   05BF  1028         BGTRU   20$                   ; Br if too long
                      51   D6   05C1  1029         INCL    R1                    ; Include the count field
                      30   BB   05C3  1030         PUSHR   #^M<R4,R5>            ; Save critical regs
        7C A6         64   51   28   05C5  1031         MOVC    R1,(R4),ICB$B_DATA(R6) ; Move optional data
                      54   51   D0   05CA  1032         MOVL    R1,R4             ; Get next character in NCB
                      30   BA   05CD  1033         POPR    #^M<R4,R5>            ; Restore regs
                           05CF  1034         ;
                           05CF  1035         ;   Check to see if the NCB is terminated correctly.  This means that
                           05CF  1036         ;   we must be at the last character in the NCB and it must be a double
                           05CF  1037         ;   quote.  However, if the user is doing a "transparent" $ASSIGN to
                           05CF  1038         ;   SYS$NET, then there is some garbage containing local the task
                           05CF  1039         ;   specification after the optional data -- ignore it.
                           05CF  1040         ;
                           05CF  1041         ;   The actual test used to verify a correct NCB is to check that there
                           05CF  1042         ;   is a """ character somewhere between the current pointer and the
                           05CF  1043         ;   end of the NCB.  This is simple and more forgiving of user error.
                           05CF  1044         ;
              55   54   D1   05CF  1045 10$:    CMPL    R4,R5                 ; Are we beyond the end ?
                   09   1E   05D2  1046         BGEQU   20$                   ; If so, NCB format error
              84   22   91   05D4  1047         CMPB    #^A"""",(R4)+         ; Is NCB delimiter there ?
                   F6   12   05D7  1048         BNEQ    10$                   ; If not, continue search
              50   00'  D0   05D9  1049         MOVL    S^#SS$_NORMAL,R0      ; Indicate success
                        05   05DC  1050         RSB
                           05DD  1051
           50    0000'8F   3C   05DD  1052 20$:    MOVZWL  #SS$_IVDEVNAM,R0      ; Signal illegal NCB
                        05   05E2  1053         RSB
```

```
                        05E3  1055 CHECK_ACCESS:                          ; See if access is allowed to node
    53  00000000'EF    D0  05E3  1056          MOVL    NET$GL_SAVE_IRP,R3  ; Get the IRP address
              12        E0  05EA  1057          BBS     #PRV$V_OPER,-       ; If user has OPER then the connect is
           3E 40 A3          05EC  1058                  IRP$Q_NT_PRVMSK(R3),100$; always allowed -- bypass all checks
                             05EF  1059          ;
                             05EF  1060          ;
                             05EF  1061          ;   Check to see if the connect is allowed based on the state of the
                             05EF  1062          ;   local node.
                             05EF  1063          ;
                             05EF  1064          ;       state       Allow connect if
                             05EF  1065          ;       --------    ----------------
                             05EF  1066          ;       ON          always
                             05EF  1067          ;       RESTRICT    if this is a connect initiate, or
                             05EF  1068          ;                   if the partner node is the local node
                             05EF  1069          ;       SHUT        never
                             05EF  1070          ;       OFF         never
                             05EF  1071          ;
                             05EF  1072          ;
    50  00000000'EF    D0  05EF  1073          MOVL    NET$GL_PTR_VCB,R0   ; Get the RCB address
      50    61 A0    9A  05F6  1074          MOVZBL  RCB$B_STI(R0),R0    ; Get the local node state
         50    01    91  05FA  1075          CMPB    S^#ACP$C_STA_N,R0   ; Is state "ON"?
               10    13  05FD  1076          BEQL    10$                 ; If EQL yes - no local restrictions
         50    02    91  05FF  1077          CMPB    S^#ACP$C_STA_R,R0   ; Is state "RESTRICTED"?
               2D    12  0602  1078          BNEQ    200$                ; If NEQ no, connect not allowed
         008D  C6    B5  0604  1079          TSTW    ICB$W_REMNOD(R6)    ; Is it for the local node?
               23    13  0608  1080          BEQL    100$                ; If EQL yes - connect OK
            02 A6    B5  060A  1081          TSTW    ICB$W_LOCLNK(R6)    ; Connect initiate?
               22    12  060D  1082          BNEQ    200$                ; If NEQ no - connect not allowed
                         060F  1083 10$:     ;
                         060F  1084          ;
                         060F  1085          ;   Check to see if the connect is allowed based on the local access
                         060F  1086          ;   restrictions set for the remote node.
                         060F  1087          ;
                         060F  1088          $DISPATCH  TYPE=B,NDI_B_ACC -   ;
                         060F  1089          <-
                         060F  1090              <NMA$C_ACES_NONE, 200$> -   ; No access allowed
                         060F  1091              <NMA$C_ACES_INCO,  60$> -   ; Inbound access allowed
                         060F  1092              <NMA$C_ACES_OUTG,  50$> -   ; Outbound access allowed
                         060F  1093              <NMA$C_ACES_BOTH, 100$> -   ; All access allowed
                         060F  1094          >
            0C    11    061F  1095          BRB     100$                ; Code is not recognized, ignore it
         02 A6    B5  0621  1096 50$:     TSTW    ICB$W_LOCLNK(R6)    ; No inbound access. Connect confirm ?
            0B    12  0624  1097          BNEQ    200$                ; If NEQ then yes, access not allowed
            05    11  0626  1098          BRB     100$                ; Else report success
         02 A6    B5  0628  1099 60$:     TSTW    ICB$W_LOCLNK(R6)    ; No outbound access. Connect initiate?
            04    13  062B  1100          BEQL    200$                ; If EQL then yes, access not allowed
      50    00'   D0  062D  1101 100$:    MOVL    S^#SS$_NORMAL,R0    ; Indicate success
            05    05  0630  1102          RSB
                         0631  1103
                         0631  1104 200$:     ;
                         0631  1105          ;   The connection is not allowed.  Tell NETDRIVER to terminate the
                         0631  1106          ;   link.  Return an error message to our caller.
                         0631  1107          ;
      53    02 A6    3C  0631  1108          MOVZWL  ICB$W_LOCLNK(R6),R3 ; Setup local link number
         52    03    3C  0635  1109          MOVZWL  #NET$C_DR_SHUT,R2   ; Setup disconnect reason
51  00000000'EF    D0  0638  1110          MOVL    NET$GL_SAVE_IRP,R1  ; Get user's IRP
      51    0C A1    D0  063F  1111          MOVL    IRP$L_PID(R1),R1    ; Setup user's PID
```

```
                00000000'EF   16  0643  1112          JSB     NET$CONNECT_FAIL        ; Report connect failure to NETDRIVER
            50      0000'8F   3C  0649  1113          MOVZWL  #SS$_SHUT,R0            ; Signal connects not allowed
                              05  064E  1114          RSB
```

```
                                064F  1116 .SBTTL  DFLT_ACCESS - Get default access control
                                064F  1117 ;+
                                064F  1118 ;
                                064F  1119 ; Use the default information from the NDI block.
                                064F  1120 ;
                                064F  1121 ;-
                                064F  1122 DFLT_ACCESS:                                 ; Get default access control
                      3C A6  94 064F  1123          CLRB    ICB$B_ACCESS(R6)          ; Init access string length
00000000'EF   00000010'EF  9E 0652  1124          MOVAB   NONPRV_TAB,ACC_TAB        ; Assume no privileges needed
     5A   00000008'EF  D0 065D  1125          MOVL    OBI_PTR,R10               ; Get OBI CNF pointer
                   03  12 0664  1126          BNEQ    10$                       ; If NEQ then OBI exists
                 0101  31 0666  1127          BRW     100$                      ;
                       0669  1128 10$:    $GETFLD obi,l,lpr                     ; Get the high order priv mask field
        00000000'FF   58  D0 0676  1129          MOVL    R8,@NET$GL_UTLBUF         ; Save the low order priority mask
                       067D  1130          $GETFLD obi,l,hpr                     ; Get the low order priv mask field
        5A   00000000'EF  D0 068A  1131          MOVL    NET$GL_UTLBUF,R10         ; Point to the utility buffer
              04 AA   58  D0 0691  1132          MOVL    R8,4(R10)                 ; Save the high order priority mask
                       0695  1133
                       0695  1134          ASSUME  PRV$V_NETMBX    LT 32
                       0695  1135          ASSUME  PRV$V_TMPMBX    LT 32
                       0695  1136
              00 6A   0F  E5 0695  1137          BBCC    #PRV$V_TMPMBX,(R10),20$ ; Zero non-priv bits
              00 6A   14  E5 0699  1138 20$:     BBCC    #PRV$V_NETMBX,(R10),30$ ;
                 50   6A  7D 069D  1139 30$:     MOVQ    (R10),R0                  ; Get required privilege mask
                       23  13 06A0  1140          BEQL    40$                       ; If EQL then none needed
           53   00000000'EF  D0 06A2  1141          MOVL    NET$GL_SAVE_IRP,R3        ; Get current IRP pointer
                 50   40 A3  CA 06A9  1142          BICL    IRP$Q_NT_PRVMSK(R3),R0    ; Test for required privileges
                       13  12 06AD  1143          BNEQ    35$                       ; Br if user lacks privilege
                 51   44 A3  CA 06AF  1144          BICL    IRP$Q_NT_PRVMSK+4(R3),R1  ; Test high order part of mask
                       0D  12 06B3  1145          BNEQ    35$                       ; Br if user lacks privilege
00000000'EF    00000000'EF  9E 06B5  1146          MOVAB   PRV_TAB,ACC_TAB           ; Setup for priv access
                       03  11 06C0  1147          BRB     40$                       ; Continue
                     00A5  31 06C2  1148 35$:     BRW     100$                      ; No default access control
                           06C5  1149          ;
                           06C5  1150          ;
                           06C5  1151          ;  Get NDI to use for default access control.  If no NDI is
                           06C5  1152          ;  currently specified then there's no default.
                           06C5  1153          ;
           5B   00000000'EF  D0 06C5  1154 40$:     MOVL    NET$GL_CNR_NDI,R11        ; Get NDI root pointer
           5A   00000004'EF  D0 06CC  1155          MOVL    NDI_PTR,R10               ; Get NDI CNF pointer
                       ED  13 06D3  1156          BEQL    35$                       ; Br if no NDI block
                           06D5  1157          ;
                           06D5  1158          ;  If the NDI is a
                           06D5  1159          ;  loopnode NDI and its access control is null, use the access control
                           06D5  1160          ;  of the NDI with the matching address and which is not a loopnode
                           06D5  1161          ;  (currently this can only be the local NDI).  If there is no such
                           06D5  1162          ;  NDI then there is no default access control.
                           06D5  1163          ;
                           06D5  1164          $GETFLD ndi,v,loo                 ; Loopnode ?
                    39 58  E9 06E2  1165          BLBC    R8,60$                    ; If loopnode,
           59   00000000'FF  D0 06E5  1166          MOVL    @ACC_TAB,R9               ; Setup first field (user) id
                00000000'EF  16 06EC  1167          JSB     CNF$GET_FIELD             ; Get the USER_ID field
                    29 50  E8 06F2  1168          BLBS    R0,60$                    ; If LBS then non-null, use it
                58   008D C6  3C 06F5  1169 50$:     MOVZWL  ICB$W_REMNOD(R6),R8       ; Get node address
                       5A  D4 06FA  1170          CLRL    R10                       ; Indicate no current CNF
                           06FC  1171          $SEARCH  eql,ndi,l,add            ; Find CNF with matching address
                    5C 50  E9 070B  1172          BLBC    R0,100$                   ; No default access if no NDI
```

```
                     070E  1173          $GETFLD ndi,v_loo                       ; Loopnode ?
                4C 58 E8  071B  1174          BLBS    R8,100$                 ; If LBS its a loopnode - can't use it
                          071E  1175                                            ; Loop nodes are stored in the list
                          071E  1176                                            ; last and so there's no use searching
                          071E  1177                                            ; any further
                          071E  1178 60$:       ;
                          071E  1179          ;   If this connect is for the local node, and we have determined
                          071E  1180          ;   that the non-privileged account is to be used, then don't provide
                          071E  1181          ;   any default outbound access control, but instead, rely on the
                          071E  1182          ;   access control being defaulted on the incoming side.  This is
                          071E  1183          ;   to avoid conflict with the proxy mechanism for executor connects.
                          071E  1184          ;
             12 AA    B5  071E  1185          TSTW    CNF$W_ID(R10)           ; Is this the local node?
                10    12  0721  1186          BNEQ    70$                     ; Skip if not
50   00000010'EF    9E  0723  1187          MOVAB   NONPRV_TAB,R0           ; Get address of non-priv param table
50   00000000'EF    D1  072A  1188          CMPL    ACC_TAB,R0              ; Is connect non-priv or privileged?
                37    13  0731  1189          BEQL    100$                    ; If local non-priv connect, no default
                          0733  1190 70$:       ;
                          0733  1191          ;
                          0733  1192          ;   Move access control strings
                          0733  1193          ;
                30    BB  0733  1194          PUSHR   #^M<R4,R5>              ; Save critical regs
          53    3D A6    9E  0735  1195          MOVAB   ICB$T_ACCESS(R6),R3     ; Get output pointer
59   00000000'FF    D0  0739  1196 80$:       MOVL    @ACC_TAB,R9             ; Get field i.d.
                26    13  0740  1197          BEQL    90$                     ; Done if EQL
00000000'EF    04    C0  0742  1198          ADDL    #4,ACC_TAB              ; Bump the pointer
     00000000'EF    16  0749  1199          JSB     CNF$GET_FIELD           ; Get the string descriptor
          3C A6    57  0750  1200          ADDB    R7,ICB$B_ACCESS(R6)     ; Update total size
             3C A6    96  0753  1201          INCB    ICB$B_ACCESS(R6)        ; Account for count byte
             40 8F    91  0756  1202          CMPB    #ICB$C_ACCESS,-         ; Can it fit ?
             3C A6        0759  1203                  ICB$B_ACCESS(R6)        ;
                11    19  075B  1204          BLSS    200$                    ; If LSS no, must be bug
          83    57    90  075D  1205          MOVB    R7,(R3)+                ; Enter count field
                D7    13  0760  1206          BEQL    80$                     ; If EQL then get next string
63   68    57    28  0762  1207          MOVC3   R7,(R8),(R3)            ; Enter string
                D1    11  0766  1208          BRB     80$                     ; Loop
                30    BA  0768  1209 90$:       POPR    #^M<R4,R5>              ; Restore regs
                          076A  1210          ;
          50   00'    D0  076A  1211 100$:      MOVL    S^#SS$_NORMAL,R0        ; Always successful
                05    076D  1212          RSB
                          076E  1213
                          076E  1214 200$:      BUG_CHECK NETNOSTATE,FATAL      ; Bugcheck
```

```
                                                H  7
                     0772  1216 .SBTTL  GET_STR_NUM - Get next numeric token
                     0772  1217 ;+
                     0772  1218 ;
                     0772  1219 ; The next string is scanned until the first non-numeric, non-alphabetic
                     0772  1220 ; ascii character.  All lower case alphabetics are converted to upper
                     0772  1221 ; case.  Leading blanks and tabs are skipped.  If the string contains
                     0772  1222 ; all ascii numeric characters, it is converted from its ascii-decimal
                     0772  1223 ; form to binary.
                     0772  1224 ;
                     0772  1225 ; INPUTS:       R9  Maximum allowed output length
                     0772  1226 ;               R8  Pointer to input buffer
                     0772  1227 ;
                     0772  1228 ;               R7,R3-R0 Scratch
                     0772  1229 ;
                     0772  1230 ; OUTPUTS:      R7  Number of characters in output buffer
                     0772  1231 ;               R4  Pointer to next unparsed byte in input stream
                     0772  1232 ;               R3  Garbage
                     0772  1233 ;               R2  Converted ascii value if R1 has low bit set,
                     0772  1234 ;                   zero if R7=0
                     0772  1235 ;               R1  Low bit set if string was all numeric or null
                     0772  1236 ;               R0  Garbage
                     0772  1237 ;
                     0772  1238 ;               All other registers are preserved.
                     0772  1239 ;-
                     0772  1240 GET_STR_NUM:                                ; Get string or number
 53  00000030'EF  9E 0772  1241         MOVAB   NET$AB_UPASCNUM,R3          ; Setup translation table
           27  10 0779  1242         BSBB    GET_TOKEN                   ; Get the translated string
           52  D4 077B  1243         CLRL    R2                          ; Zero string converted value
       51  57  D0 077D  1244         MOVL    R7,R1                       ; Any characters in moved ?
           1A  13 0780  1245         BEQL    15$                         ; Br if none moved
       53  58  D0 0782  1246         MOVL    R8,R3                       ; Get ptr to first character
   50  83  30  83 0785  1247 10$:     SUBB3   #^A"0",(R3)+,R0             ; Get binary of character
           14  19 0789  1248         BLSS    20$                         ; Br if non-numeric
       09  50  91 078B  1249         CMPB    R0,#9                       ; Test upper bound
           0F  14 078E  1250         BGTR    20$                         ; Br if non-numeric
       50  50  9A 0790  1251         MOVZBL  R0,R0                       ; Zero garbage bytes
       52  0A  C4 0793  1252         MULL    #10,R2                      ; Multiply old value by ten
       52  50  C0 0796  1253         ADDL    R0,R2                       ; and add new increment
         E9 51  F5 0799  1254         SOBGTR  R1,10$                      ; Loop for each character
           51  D6 079C  1255 15$:     INCL    R1                          ; Flag 'all numeric string'
           05  079E  1256         RSB
       51  D4 079F  1257 20$:     CLRL    R1                          ; Flag 'non-numeric'
           05  07A1  1258         RSB
```

```
                                07A2  1260 .SBTTL  GET_TOKEN - Get next token
                                07A2  1261 ;+
                                07A2  1262 ;
                                07A2  1263 ; The input stream is scanned until a delimiter is found.  A delimiter
                                07A2  1264 ; is defined as any character which the translation table translates
                                07A2  1265 ; to a zero.  The input pointer is advanced up to, but not past, the
                                07A2  1266 ; delimiter.  All leading blanks and tabs are skipped over.
                                07A2  1267 ;
                                07A2  1268 ; INPUTS:  R9      Max size of input string
                                07A2  1269 ;           R8      Address of buffer to receive output
                                07A2  1270 ;           R7      Scratch
                                07A2  1271 ;           R6      ICB pointer
                                07A2  1272 ;           R5      Points past NCB
                                07A2  1273 ;           R4      Next character in input string
                                07A2  1274 ;           R3      Translation table address
                                07A2  1275 ;           R2-R0   Scratch
                                07A2  1276 ;
                                07A2  1277 ; OUTPUTS: R7      Number of characters in output buffer
                                07A2  1278 ;           R4      Points to first unmoved character
                                07A2  1279 ;           R2-R0   Garbage
                                07A2  1280 ;
                                07A2  1281 ;           All other registers are preserved.
                                07A2  1282 ;-
                                07A2  1283 GET_TOKEN:                                   ; Move input up to delimiter
                          1F    07A2  1284         BSBB    SCAN_BLANKS                  ; Skip blanks and tabs
                          55    07A4  1285         PUSHL   R5                           ; Protect regs form MOVTUC
                    50    54    07A6  1286         SUBL3   R4,R5,R0                     ; Get bytes left in input stream
68  59  63  00   64    50    07AA  1287         MOVTUC  R0,(R4),#0,(R3),R9,(R8)      ; Translate/move the string
                    54    51    07B1  1288         MOVL    R1,R4                        ; Get input stream pointer
                    57    55    07B4  1289         SUBL3   R8,R5,R7                     ; Get # of bytes moved
                          55 8ED0 07B8  1290         POPL    R5                           ; Recover regs
                             05 07BB  1291         RSB
                                07BC  1292 ;+
                                07BC  1293 ; SCAN_BLANKS - Skip over blank and tab characters
                                07BC  1294 ;
                                07BC  1295 ; The input stream is advanced to the first non blank/tab character.
                                07BC  1296 ;
                                07BC  1297 ; INPUTS:  R5   Points to first character beyond input stream
                                07BC  1298 ;          R4   Points to next character in input stream
                                07BC  1299 ; OUTPUTS: R4   Points to next non blank/tab character in input stream
                                07BC  1300 ;-
                                07BC  1301                      .ENABL  LSB
55      54    D1                07BC  1302 10$:    CMPL    R4,R5                        ; At the end of input stream ?
            10  1E                07BF  1303         BGEQU   20$                          ; If so, branch
            54  D6                07C1  1304         INCL    R4                           ; Advance input pointer
                                07C3  1305
                                07C3  1306 SCAN_BLANKS:                                 ; Skip over blanks and tabs
            64  95                07C3  1307         TSTB    (R4)                         ; Is character null?
            F5  13                07C5  1308         BEQL    10$                          ; If so, skip it
64          20  91                07C7  1309         CMPB    #SPACE,(R4)                  ; Is character a space ?
            F0  13                07CA  1310         BEQL    10$                          ; If so then loop
64          09  91                07CC  1311         CMPB    #TAB,(R4)                    ; Is it a tab ?
            EB  13                07CF  1312         BEQL    10$                          ; If so then loop
                05                07D1  1313 20$:    RSB
                                07D2  1314                      .DSABL  LSB
                                07D2  1315
                                07D2  1316 .END
```

```
$$T1                            = 00000001
$$_NSPMSG                       = 00000000
$$_TR3MSG                       = 00000000
$$_TR4MSG                       = 00000000
ABD$C_LENGTH                    = 00000008
ABD$C_NAME                      = 00000002
ABD$W_COUNT                     = 00000002
ABD$W_TEXT                      = 00000000
ACCESS_DONE                       00000157 R      04
ACC_TAB                           00000000 R      03
ACP$C_STA_F                     = 00000004
ACP$C_STA_H                     = 00000005
ACP$C_STA_I                     = 00000000
ACP$C_STA_N                     = 00000001
ACP$C_STA_R                     = 00000002
ACP$C_STA_S                     = 00000003
ADJ$C_PTY_PH2                   = 00000002
ADJ$C_PTY_PH4N                  = 00000005
ADJ$C_PTY_UNK                   = FFFFFFFF
BIN_HEXASC                        00000020 R      02
BIT...                          = 00000006
BUG$_NETNOSTATE                   ********   X    04
C                               = 00000001
CALL_NETDRIVER                    ********   X    04
CHECK_ACCESS                      000005E3 R      04
CNF$GET_FIELD                     ********   X    04
CNF$KEY_SEARCH                    ********   X    04
CNF$W_ID                        = 00000012
CNF$_ADVANCE                    = 00000000
CNF$_QUIT                       = 00000002
CNF$_TAKE_CURR                  = 00000003
CNF$_TAKE_PREV                  = 00000001
CNR$C_FLINK                     = 00000000
DFLT_ACCESS                       0000064F R      04
EXE$IPID_TO_EPID                  ********   X    04
GET_STR_NUM                       00000772 R      04
GET_TOKEN                         000007A2 R      04
ICB$B_ACCESS                    = 0000003C
ICB$B_DATA                      = 0000007C
ICB$B_DSTFMT                    = 00000029
ICB$B_DSTOBJ                    = 0000002A
ICB$B_LPRNAM                    = 00000014
ICB$B_RID                       = 00000092
ICB$B_RPRNAM                    = 00000028
ICB$C_ACCESS                    = 00000040
ICB$C_LENGTH                    = 000000A3
ICB$C_RID                       = 00000010
ICB$C_RPRNAM                    = 00000014
ICB$T_ACCESS                    = 0000003D
ICB$T_DSTDSC                    = 0000002B
ICB$T_RID                       = 00000093
ICB$W_DLY_FACT                  = 0000000E
ICB$W_DLY_WGHT                  = 00000010
ICB$W_LOCLNK                    = 00000002
ICB$W_PATH                      = 00000000
ICB$W_REMNOD                    = 0000008D
ICB$W_RETRAN                    = 0000000C
ICB$W_SEGSIZ                    = 00000012
ICB$W_TIM_INACT                 = 00000006
ICB$W_TIM_OCON                  = 00000004
INT_B_PRX                         0000001E R      03
IRP$L_DIAGBUF                   = 0000004C
IRP$L_PID                       = 0000000C
IRP$L_SVAPTE                    = 0000002C
IRP$L_UCB                       = 0000001C
IRP$Q_NT_PRVMSK                 = 00000040
JPI$_USERNAME                   = 00000202
JPI_B_UNAME                       00000028 R      03
JPI_ITEM_LIST                     00000038 R      03
JPI_Q_IOSB                        00000020 R      03
JPI_T_UNAME                       0000002C R      03
LPD$B_PLVEC                     = 00000028
LPD$W_PTH                       = 00000020
LSB                             = 00000000
LSB$B_R_CXBCNT                  = 00000028
LSB$B_R_CXBQUO                  = 00000029
LSB$B_SPARE                     = 0000002A
LSB$B_STS                       = 0000002B
LSB$B_X_ADJ                     = 0000000B
LSB$B_X_CXBACT                  = 0000000D
LSB$B_X_CXBCNT                  = 0000000F
LSB$B_X_CXBQUO                  = 0000000E
LSB$B_X_PKTWND                  = 0000000C
LSB$B_X_REQ                     = 0000000A
LSB$L_CROSS                     = 0000002C
LSB$L_R_CXB                     = 00000020
LSB$L_R_IRP                     = 0000001C
LSB$L_X_CXB                     = 00000018
LSB$L_X_IRP                     = 00000014
LSB$L_X_PND                     = 00000010
LSB$M_BOM                       = 00000020
LSB$M_EOM                       = 00000040
LSB$M_LI                        = 00000001
LSB$S_LSB                       = 00000030
LSB$S_SPARE                     = 00000004
LSB$S_STS                       = 00000001
LSB$V_BOM                       = 00000005
LSB$V_EOM                       = 00000006
LSB$V_LI                        = 00000000
LSB$V_SPARE                     = 00000001
LSB$W_HAA                       = 00000008
LSB$W_HAR                       = 00000006
LSB$W_HAX                       = 00000026
LSB$W_HNR                       = 00000024
LSB$W_HXS                       = 00000004
LSB$W_LNX                       = 00000002
LSB$W_LUX                       = 00000000
NDI_B_ACC                         0000001C R      03
NDI_PTR                           00000004 R      03
NET$AB_ACC_TAB                    00000230 R      02
NET$AB_OBJTRAN                    00000130 R      02
NET$AB_UPASCNUM                   00000030 RG     02
NET$ALONPGD_Z                     ********   X    04
NET$CONNECT                       00000000 RG     04
```

```
NET$CONNECT_FAIL            ********    X   04
NET$C_ACT_TIMER           = 0000001E
NET$C_DR_SHUT             = 00000003
NET$C_EFN_ASYN            = 00000002
NET$C_EFN_WAIT            = 00000001
NET$C_IPL                 = 00000008
NET$C_MAXACCFLD           = 00000027
NET$C_MAXLINNAM           = 0000000F
NET$C_MAXLNK              = 000003FF
NET$C_MAXNODNAM           = 00000006
NET$C_MAXOBJNAM           = 0000000C
NET$C_MAX_AREAS           = 0000003F
NET$C_MAX_LINES           = 00000040
NET$C_MAX_NCB             = 0000006E
NET$C_MAX_NODES           = 000003FF
NET$C_MAX_OBJ             = 000000FF
NET$C_MAX_WQE             = 00000014
NET$C_MINBUFSIZ           = 000000C0
NET$C_TID_ACT             = 00000003
NET$C_TID_RUS             = 00000001
NET$C_TID_XRT             = 00000002
NET$C_TRCTL_CEL           = 00000002
NET$C_TRCTL_OVR           = 00000005
NET$C_UTLBUFSIZ           = 00001000
NET$DEALLOCATE              ********    X   04
NET$FIND_ADJ                ********    X   04
NET$GETUTLBUF               ********    X   04
NET$GL_CNR_CRI              ********    X   04
NET$GL_CNR_NDI              ********    X   04
NET$GL_CNR_OBI              ********    X   04
NET$GL_CNR_PLI              ********    X   04
NET$GL_FLAGS                ********    X   04
NET$GL_PTR_VCB              ********    X   04
NET$GL_SAVE_IRP             ********    X   04
NET$GL_UTLBOF               ********    X   04
NET$M_MAXLNKMSK           = 000003FF
NET$M_RQIRP               = 00000020
NET$NDI_BY_ADD              ********    X   04
NET$PROC_XOB                ********    X   04
NET$TEST_REACH              ********    X   04
NETUPD$_CRELNK            = 00000007
NETUPD$_TEST_ADJ          = 0000000F
NFB$C_CRI_NAM             = 04020041
NFB$C_NDI_ACC             = 02010020
NFB$C_NDI_ADD             = 02010012
NFB$C_NDI_LOO             = 02000002
NFB$C_NDI_NAC             = 02020052
NFB$C_NDI_NLI             = 0202004C
NFB$C_NDI_NNA             = 02020043
NFB$C_NDI_NPW             = 02020053
NFB$C_NDI_NUS             = 02020051
NFB$C_NDI_PAC             = 0202004F
NFB$C_NDI_PPW             = 02020050
NFB$C_NDI_PUS             = 0202004E
NFB$C_OBI_HPR             = 03010011
NFB$C_OBI_LPR             = 03010010
NFB$C_OBI_NAM             = 03020044
NFB$C_OBI_NUM             = 03010014
NFB$C_OBI_PRX             = 03010016
NFB$C_OP_EQL              = 00000000
NFB$C_PLI_BFS             = 05010027
NFB$C_PLI_PLVEC           = 05010020
NMA$C_ACES_BOTH           = 00000003
NMA$C_ACES_INCO           = 00000001
NMA$C_ACES_NONE           = 00000000
NMA$C_ACES_OUTG           = 00000002
NONPRV_TAB                  00000010 R      02
NSP$$$_QUAL_ACK           = 00000000
NSP$$$_QUAL_ALTFLW        = 00000000
NSP$$$_QUAL_DATA          = 00000000
NSP$$$_QUAL_FLW           = 00000000
NSP$$$_QUAL_INF           = 00000000
NSP$$$_QUAL_MSG           = 00000000
NSP$$$_QUAL_SRV           = 00000000
NSP$C_EXT_LNK             = 0000001E
NSP$C_FLW_DATA            = 00000000
NSP$C_FLW_INT             = 00000001
NSP$C_FLW_NOP             = 00000000
NSP$C_FLW_XOFF            = 00000001
NSP$C_FLW_XON             = 00000002
NSP$C_HSZ_ACK             = 00000007
NSP$C_HSZ_CA              = 00000003
NSP$C_HSZ_CC              = 00000064
NSP$C_HSZ_CD              = 000000F0
NSP$C_HSZ_CI              = 000000F0
NSP$C_HSZ_DATA            = 00000009
NSP$C_HSZ_DC              = 00000016
NSP$C_HSZ_DI              = 00000016
NSP$C_HSZ_INT             = 00000009
NSP$C_HSZ_LS              = 00000009
NSP$C_INF_V31             = 00000001
NSP$C_INF_V32             = 00000000
NSP$C_INF_V33             = 00000002
NSP$C_MAXADR              = 00000009
NSP$C_MSG_CA              = 00000024
NSP$C_MSG_CC              = 00000028
NSP$C_MSG_CI              = 00000018
NSP$C_MSG_DATA            = 00000000
NSP$C_MSG_DC              = 00000048
NSP$C_MSG_DI              = 00000038
NSP$C_MSG_DTACK           = 00000004
NSP$C_MSG_INT             = 00000030
NSP$C_MSG_LIACK           = 00000014
NSP$C_MSG_LS              = 00000010
NSP$C_SRV_MFC             = 00000002
NSP$C_SRV_NFC             = 00000000
NSP$C_SRV_REQ             = 00000001
NSP$C_SRV_SFC             = 00000001
NSP$M_ACK_NAK             = 00001000
NSP$M_ACK_NUM             = 00000FFF
NSP$M_ACK_VALID           = 00008000
NSP$M_DATA_BOM            = 00000020
NSP$M_DATA_EOM            = 00000040
NSP$M_DATA_OVFW           = 00000080
```

```
NSP$M_FLW_CHAN          = 0000000C
NSP$M_FLW_DRV           = 000000F0
NSP$M_FLW_INT           = 00000020
NSP$M_FLW_INUSE         = 00000010
NSP$M_FLW_LISUB         = 00000004
NSP$M_FLW_MODE          = 00000003
NSP$M_FLW_SP1           = 00000008
NSP$M_FLW_SP2           = 00000040
NSP$M_FLW_SP3           = 00000080
NSP$M_FLW_XOFF          = 00000001
NSP$M_FLW_XON           = 00000002
NSP$M_INF_VER           = 00000003
NSP$M_MSG_INT           = 00000020
NSP$M_MSG_LI            = 00000010
NSP$M_SRV_01            = 00000003
NSP$M_SRV_EXT           = 00000080
NSP$M_SRV_FLW           = 0000000C
NSP$M_SRV_REQ           = 000000F3
NSP$M_SRV_SP1           = 00000070
NSP$R_QUAL              = 00000000
NSP$S_ACK_NUM           = 0000000C
NSP$S_ACK_SP2           = 00000002
NSP$S_DATA_SP           = 00000005
NSP$S_FLW_CHAN          = 00000002
NSP$S_FLW_DRV           = 00000004
NSP$S_FLW_MODE          = 00000002
NSP$S_INF_VER           = 00000002
NSP$S_MSG_SP1           = 00000004
NSP$S_NSPMSG            = 00000005
NSP$S_QUAL              = 00000005
NSP$S_QUAL_ACK          = 00000002
NSP$S_QUAL_ALTFLW       = 00000001
NSP$S_QUAL_DATA         = 00000001
NSP$S_QUAL_FLW          = 00000001
NSP$S_QUAL_INF          = 00000001
NSP$S_QUAL_MSG          = 00000005
NSP$S_QUAL_SRV          = 00000001
NSP$S_SRV_01            = 00000002
NSP$S_SRV_FLW           = 00000002
NSP$S_SRV_SP1           = 00000003
NSP$V_ACK_NAK           = 0000000C
NSP$V_ACK_NUM           = 00000000
NSP$V_ACK_SP2           = 0000000D
NSP$V_ACK_VALID         = 0000000F
NSP$V_DATA_BOM          = 00000005
NSP$V_DATA_EOM          = 00000006
NSP$V_DATA_OVFW         = 00000007
NSP$V_DATA_SP           = 00000000
NSP$V_FLW_CHAN          = 00000002
NSP$V_FLW_DRV           = 00000004
NSP$V_FLW_INT           = 00000005
NSP$V_FLW_INUSE         = 00000004
NSP$V_FLW_LISUB         = 00000002
NSP$V_FLW_MODE          = 00000000
NSP$V_FLW_SP1           = 00000003
NSP$V_FLW_SP2           = 00000006
NSP$V_FLW_SP3           = 00000007
NSP$V_FLW_XOFF          = 00000000
NSP$V_FLW_XON           = 00000001
NSP$V_INF_VER           = 00000000
NSP$V_MSG_INT           = 00000005
NSP$V_MSG_LI            = 00000004
NSP$V_MSG_SP1           = 00000000
NSP$V_SRV_01            = 00000000
NSP$V_SRV_EXT           = 00000007
NSP$V_SRV_FLW           = 00000002
NSP$V_SRV_SP1           = 00000004
NSP$W_DSTLNK            = 00000001
NSP$W_SRCLNK            = 00000003
OBI_B_PRX                 0000001D R      03
OBI_PTR                   00000008 R      03
OBJ_Q_DESC                0000000C R      03
PRS_ACCESS                000003E0 R      04
PRS_END                   00000593 R      04
PRS_NCB                   000001C2 R      04
PRS_NODE                  00000216 R      04
PRS_OBJECT                00000433 R      04
PRV$V_NETMBX            = 00000014
PRV$V_OPER              = 00000012
PRV$V_TMPMBX            = 0000000F
PRV_TAB                   00000000 R      02
RCB$B_ECL_DAC           = 00000066
RCB$B_ECL_DFA           = 00C00064
RCB$B_ECL_DPX           = 00000067
RCB$B_ECL_DWE           = 00000065
RCB$B_ECL_RFA           = 00000063
RCB$B_ETY               = 0000008A
RCB$B_HOMEAREA          = 00000088
RCB$B_STI               = 00000061
RCB$W_ADDR              = 0000000E
RCB$W_DRT               = 000000AA
RCB$W_ECLSEGSIZ         = 0000007C
RCB$W_TIM_CNO           = 00000078
RCB$W_TIM_IAT           = 00000074
SCAN_BLANKS               000007C3 R      04
SIZ...                  = 00000001
SPACE                   = 00000020
SS$_DEVOFFLINE            ********   X    04
SS$_INVLOGIN              ********   X    04
SS$_IVDEVNAM              ********   X    04
SS$_NOLINKS               ********   X    04
SS$_NORMAL                ********   X    04
SS$_NOSUCHNODE            ********   X    04
SS$_NOSUCHOBJ             ********   X    04
SS$_SHUT                  ********   X    04
SS$_TOOMUCHDATA           ********   X    04
SYS$GETJPI                ********  GX    04
SYS$WAITFR                ********  GX    04
TAB                     = 00000009
TR$C_MAXHDR             = 0000001C
TR$C_NI_ALLEND1         = 040000AB
TR$C_NI_ALLEND2         = 00000000
TR$C_NI_ALLROU1         = 030000AB
TR$C_NI_ALLROU2         = 00000000
```

```
TR$C_NI_PREFIX                  = 000400AA
TR$C_NI_PROT                    = 00000360
TR$C_PRI_ECL                    = 0000001F
TR$C_PRI_RTHRU                  = 0000001F
TR3$$_QUAL_MSG                  = 00000000
TR3$$_QUAL_RTFLG                = 00000000
TR3$C_MSZ_DATA                  = 00000006
TR3$C_MSG_DATA                  = 00000002
TR3$C_MSG_HELLO                 = 00000005
TR3$C_MSG_INIT                  = 00000001
TR3$C_MSG_NOP2                  = 00000008
TR3$C_MSG_ROUT                  = 00000007
TR3$C_MSG_STR2                  = 00000058
TR3$C_MSG_VERF                  = 00000003
TR3$M_MSG_CTL                   = 00000001
TR3$M_MSG_RTH                   = 00000002
TR3$M_RTFLG_PH2                 = 00000040
TR3$M_RTFLG_RQR                 = 00000008
TR3$M_RTFLG_RTS                 = 00000010
TR3$R_QUAL                      = 00000000
TR3$S_QUAL                      = 00000001
TR3$S_QUAL_MSG                  = 00000001
TR3$S_QUAL_RTFLG                = 00000001
TR3$S_RTFLG_012                 = 00000003
TR3$S_TR3MSG                    = 00000001
TR3$V_MSG_CTL                   = 00000000
TR3$V_MSG_RTH                   = 00000001
TR3$V_RTFLG_012                 = 00000000
TR3$V_RTFLG_5                   = 00000005
TR3$V_RTFLG_7                   = 00000007
TR3$V_RTFLG_PH2                 = 00000006
TR3$V_RTFLG_RQR                 = 00000003
TR3$V_RTFLG_RTS                 = 00000004
TR4$$$_QUAL_ADDR                = 00000000
TR4$$$_QUAL_RTFLG               = 00000000
TR4$$$_QUAL_SCLASS              = 00000000
TR4$C_BCE_MID1                  = 040000AB
TR4$C_BCE_MID2                  = 00000000
TR4$C_BCR_MID1                  = 030000AB
TR4$C_BCR_MID2                  = 00000000
TR4$C_BCT3MULT                  = 00000008
TR4$C_END_NODE                  = 00000003
TR4$C_HIORD                     = 000400AA
TR4$C_HSZ_DATA                  = 00000015
TR4$C_MSG_BCEHEL                = 0000000D
TR4$C_MSG_BCRHEL                = 0000000B
TR4$C_MSG_LDATA                 = 00000006
TR4$C_MSG_RDATA                 = 00000002
TR4$C_PRO_TYPE                  = 00000360
TR4$C_RTR_LVL1                  = 00000002
TR4$C_RTR_LVL2                  = 00000001
TR4$C_T3MULT                    = 00000002
TR4$C_VER_HIB                   = 00000000
TR4$C_VER_LOWW                  = 00000002
TR4$M_ADDR_AREA                 = 0000FC00
TR4$M_ADDR_DEST                 = 000003FF
TR4$M_RTFLG_INI                 = 00000020
TR4$M_RTFLG_LNG                 = 00000004
TR4$M_RTFLG_RQR                 = 00000008
TR4$M_RTFLG_RTS                 = 00000010
TR4$R_QUAL                      = 00000000
TR4$S_ADDR_AREA                 = 00000006
TR4$S_ADDR_DEST                 = 0000000A
TR4$S_QUAL                      = 00000002
TR4$S_QUAL_ADDR                 = 00000002
TR4$S_QUAL_RTFLG                = 00000001
TR4$S_QUAL_SCLASS               = 00000001
TR4$S_RTFLG_01                  = 00000002
TR4$S_RTFLG_VER                 = 00000002
TR4$S_SCLASS_57                 = 00000003
TR4$S_TR4MSG                    = 00000002
TR4$V_ADDR_AREA                 = 0000000A
TR4$V_ADDR_DEST                 = 00000000
TR4$V_RTFLG_01                  = 00000000
TR4$V_RTFLG_INI                 = 00000005
TR4$V_RTFLG_LNG                 = 00000002
TR4$V_RTFLG_RQR                 = 00000003
TR4$V_RTFLG_RTS                 = 00000004
TR4$V_RTFLG_VER                 = 00000006
TR4$V_SCLASS_1                  = 00000001
TR4$V_SCLASS_57                 = 00000005
TR4$V_SCLASS_BC                 = 00000004
TR4$V_SCLASS_LS                 = 00000002
TR4$V_SCLASS_METR               = 00000000
TR4$V_SCLASS_SUBA               = 00000003
TSK_Q_DESC                      = 00000014 R     03
XWB                             = 00000000
XWB$B_ACCESS                    = 0000000B
XWB$B_DATA                      = 0000005B
XWB$B_FIPL                      = 0000001F
XWB$B_LOGIN                     = 000000CC
XWB$B_LPRNAM                    = 000000A4
XWB$B_PRO                       = 0000005A
XWB$B_RID                       = 0000006F
XWB$B_RPRNAM                    = 000000B8
XWB$B_SP3                       = 0000006E
XWB$B_STA                       = 0000001E
XWB$B_TYPE                      = 0000000A
XWB$B_X_FLW                     = 0000006C
XWB$B_X_FLWCNT                  = 0000006D
XWB$C_COMLNG                    = 000000A4
XWB$C_CONLNG                    = 00000112
XWB$C_DATA                      = 00000010
XWB$C_LOGIN                     = 00000040
XWB$C_LPRNAM                    = 00000014
XWB$C_NDC_LNG                   = 00000020
XWB$C_NUMSTA                    = 00000008
XWB$C_RID                       = 00000010
XWB$C_RPRNAM                    = 00000014
XWB$C_STA_CAR                   = 00000002
XWB$C_STA_CCS                   = 00000004
XWB$C_STA_CIR                   = 00000003
XWB$C_STA_CIS                   = 00000001
XWB$C_STA_CLO                   = 00000000
```

```
XWB$C_STA_DIR                   =  00000006
XWB$C_STA_DIS                   =  00000007
XWB$C_STA_RUN                   =  00000005
XWB$L_DEA_IRP                   =  00000104
XWB$L_FPC                       =  00000020
XWB$L_FR3                       =  00000024
XWB$L_FR4                       =  00000028
XWB$L_ICB                       =  0000010C
XWB$L_IRP_ACC                   =  00000080
XWB$L_LINK                      =  0000002C
XWB$L_ORGUCB                    =  00000010
XWB$L_PID                       =  00000034
XWB$L_VCB                       =  00000030
XWB$L_WLBL                      =  00000004
XWB$L_WLFL                      =  00000000
XWB$M_FLG_BREAK                 =  00000001
XWB$M_FLG_CLO                   =  00000200
XWB$M_FLG_IAVL                  =  00001000
XWB$M_FLG_SCD                   =  00000100
XWB$M_FLG_SDACK                 =  00000008
XWB$M_FLG_SDFL                  =  00004000
XWB$M_FLG_SDT                   =  00000080
XWB$M_FLG_SIACK                 =  00000004
XWB$M_FLG_SIFL                  =  00002000
XWB$M_FLG_SLI                   =  00000010
XWB$M_FLG_TBPR                  =  00000800
XWB$M_FLG_WBP                   =  00000040
XWB$M_FLG_WBUF                  =  00000002
XWB$M_FLG_WDAT                  =  00000400
XWB$M_FLG_WHGL                  =  00000020
XWB$M_PRO_CCA                   =  00000008
XWB$M_PRO_NAR                   =  00000010
XWB$M_PRO_NFC                   =  00000001
XWB$M_PRO_PH2                   =  00000004
XWB$M_PRO_SFC                   =  00000002
XWB$M_STS_ASTPND                =  00000400
XWB$M_STS_ASTREQ                =  00000800
XWB$M_STS_CON                   =  00000010
XWB$M_STS_DIS                   =  00000008
XWB$M_STS_DTNAK                 =  00000100
XWB$M_STS_LINAK                 =  00000200
XWB$M_STS_NDC                   =  00001000
XWB$M_STS_OVF                   =  00000080
XWB$M_STS_RBP                   =  00000040
XWB$M_STS_SOL                   =  00000004
XWB$M_STS_TID                   =  00000001
XWB$M_STS_TLI                   =  00000002
XWB$M_STS_TMO                   =  00000020
XWB$Q_FORK                      =  00000014
XWB$Q_FREE_CXB                  =  00000118
XWB$R_CON_BLK                   =  000000A4
XWB$R_RUN_BLK                   =  000000A4
XWB$S                           =  00000006
XWB$S_COMLNG                    =  0000006E
XWB$S_CON_BLK                   =  0000006E
XWB$S_DATA                      =  00000010
XWB$S_DT                        =  00000030
XWB$S_FLG                       =  00000002
XWB$S_FORK                      =  00000008
XWB$S_FREE_CXB                  =  00000008
XWB$S_LI                        =  00000030
XWB$S_LOGIN                     =  0000003F
XWB$S_LPRNAM                    =  00000013
XWB$S_NDC                       =  00000020
XWB$S_PRO                       =  00000001
XWB$S_RID                       =  00000010
XWB$S_RPRNAM                    =  00000013
XWB$S_RUN_BLK                   =  00000064
XWB$S_STS                       =  00000002
XWB$S_XWB                       =  00000120
XWB$T                           =  00000112
XWB$T_DATA                      =  0000005C
XWB$T_DT                        =  000000A4
XWB$T_LI                        =  000000D4
XWB$T_LOGIN                     =  000000CD
XWB$T_LPRNAM                    =  000000A5
XWB$T_RID                       =  00000070
XWB$T_RPRNAM                    =  000000B9
XWB$V_FLG_BREAK                 =  00000000
XWB$V_FLG_CLO                   =  00000009
XWB$V_FLG_IAVL                  =  0000000C
XWB$V_FLG_SCD                   =  00000008
XWB$V_FLG_SDACK                 =  00000003
XWB$V_FLG_SDFL                  =  0000000E
XWB$V_FLG_SDT                   =  00000007
XWB$V_FLG_SIACK                 =  00000002
XWB$V_FLG_SIFL                  =  0000000D
XWB$V_FLG_SLI                   =  00000004
XWB$V_FLG_TBPR                  =  0000000B
XWB$V_FLG_WBP                   =  00000006
XWB$V_FLG_WBUF                  =  00000001
XWB$V_FLG_WDAT                  =  0000000A
XWB$V_FLG_WHGL                  =  00000005
XWB$V_PRO_CCA                   =  00000003
XWB$V_PRO_NAR                   =  00000004
XWB$V_PRO_NFC                   =  00000000
XWB$V_PRO_PH2                   =  00000002
XWB$V_PRO_SFC                   =  00000001
XWB$V_STS_ASTPND                =  0000000A
XWB$V_STS_ASTREQ                =  0000000B
XWB$V_STS_CON                   =  00000004
XWB$V_STS_DIS                   =  00000003
XWB$V_STS_DTNAK                 =  00000008
XWB$V_STS_LINAK                 =  00000009
XWB$V_STS_NDC                   =  0000000C
XWB$V_STS_OVF                   =  00000007
XWB$V_STS_RBP                   =  00000006
XWB$V_STS_SOL                   =  00000002
XWB$V_STS_TID                   =  00000000
XWB$V_STS_TLI                   =  00000001
XWB$V_STS_TMO                   =  00000005
XWB$W_CI_PATH                   =  00000110
XWB$W_DELAY                     =  0000004E
XWB$W_DLY_FACT                  =  00000056
```

```
XWB$W_DLY_WGHT          = 00000058
XWB$W_ELAPSE            = 0000004A
XWB$W_FLG               = 0000001C
XWB$W_LOCLNK            = 0000003E
XWB$W_LOCSIZ            = 00000040
XWB$W_PATH              = 00000038
XWB$W_PROGRESS          = 00000052
XWB$W_REFCNT            = 0000000C
XWB$W_REMLNK            = 0000003C
XWB$W_REMNOD            = 0000003A
XWB$W_REMSIZ            = 00000042
XWB$W_RETRAN            = 00000054
XWB$W_R_REASON          = 00000044
XWB$W_SIZE              = 00000008
XWB$W_STS               = 0000000E
XWB$W_TIMER             = 00000050
XWB$W_TIM_ID            = 00000048
XWB$W_TIM_INACT         = 0000004C
XWB$W_X_REASON          = 00000046
XWB$Z_NDC               = 00000084
```

Psect synopsis

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
ABS	00000000 (0.)	01 (1.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
NET_PURE	00000330 (816.)	02 (2.)	NOPIC USR CON REL LCL NOSHR NOEXE RD NOWRT NOVEC LONG
NET_IMPURE	00000048 (72.)	03 (3.)	NOPIC USR CON REL LCL NOSHR NOEXE RD WRT NOVEC LONG
NET_CODE	000007D2 (2002.)	04 (4.)	NOPIC USR CON REL LCL NOSHR EXE RD NOWRT NOVEC BYTE

Performance indicators

Phase	Page faults	CPU Time	Elapsed Time
Initialization	26	00:00:00.12	00:00:00.94
Command processing	140	00:00:01.05	00:00:04.96
Pass 1	1084	00:00:30.39	00:00:43.29
Symbol table sort	19	00:00:04.09	00:00:04.88
Pass 2	690	00:00:06.18	00:00:07.82
Symbol table output	72	00:00:00.47	00:00:00.96
Psect synopsis output	4	00:00:00.03	00:00:00.03
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	2038	00:00:42.34	00:01:02.89

```
The working set limit was 1950 pages.
173908 bytes (340 pages) of virtual memory were used to buffer the intermediate code.
There were 160 pages of symbol table space allocated to hold 2806 non-local and 87 local symbols.
1316 source lines were read in Pass 1, producing 26 object records in Pass 2.
63 pages of virtual memory were used to define 45 macros.
```

Macro library statistics

Macro library name	Macros defined
_255DUA28:[SHRLIB]NMALIBRY.MLB;1	1
_255DUA28:[SHRLIB]EVCDEF.MLB;1	0
_255DUA28:[NETACP.OBJ]NETDRV.MLB;1	2
_255DUA28:[NETACP.OBJ]NET.MLB;1	16
_255DUA28:[SYS.OBJ]LIB.MLB;1	4
_255DUA28:[SYSLIB]STARLET.MLB;2	12
TOTALS (all libraries)	35

3030 GETS were required to define 35 macros.

There were no errors, warnings or information messages.

```
MACRO/LIS=LIS$:NETCONECT/OBJ=OBJ$:NETCONECT MSRC$:NETCONECT/UPDATE=(ENH$:NETCONECT)+EXECML$/LIB+LIB$:NET/LIB+LIB$:NETDRV/LIB+SHRLIB$
```

NETDLE
LIS

NETCONFIG
LIS

NETCONECT
LIS

NETCTLALL
LIS